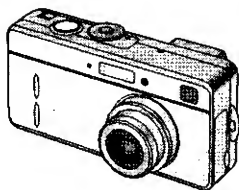


Panasonic[®]



LUMIX

Digital Camera Operating Instructions

Model No. **DMC-F1A**



LEICA
DC VARIO-ELMARIT

Before use, please read these
instructions completely.

VQT0C01

Dear Customer,

We would like to take this opportunity to thank you for purchasing this Panasonic Digital Camera. Please read these Operating Instructions carefully and keep them handy for future reference.

Information for Your Safety

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE ONLY THE RECOMMENDED ACCESSORIES AND DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE. DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Carefully observe copyright laws.

Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.

- Please note that the actual controls and components, menu items, etc. of your Digital Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.
- SD Logo is a trademark.
- Other names, company names, and product names printed in these instructions are trademarks or registered trademarks of the companies concerned.

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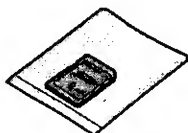
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Standard Accessories

Before using your camera, check the contents.

- 1 SD Memory Card (16 MB)
RP-SD016B



- 2 Battery Pack
DMW-BM7



- 3 AC Adaptor
DE-929AA



- 4 AC Cable
K2CA2EA00002



- 5 DC Cable
K2GJ2DC00005



- 6 A/V Cable
K1V204C10001



- 7 USB Connection Kit
(Consists of)



USB Connection Cable
K1HA05CD0002

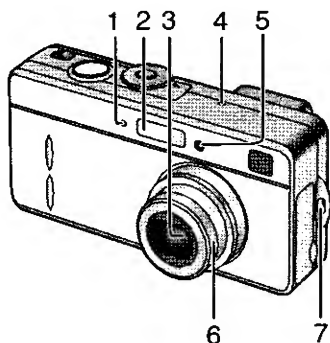


CD-ROM
VFF0183

- 8 Strap
VFC3952

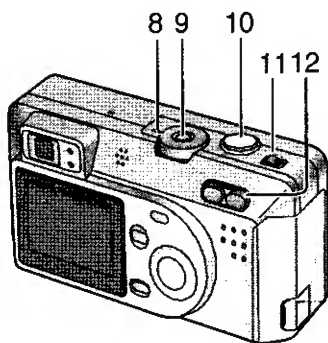


Names of the Components



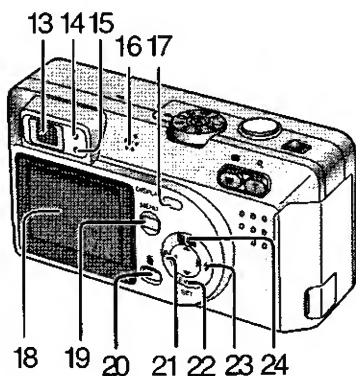
[Front View]

- 1 Flash Sensor (P33)
- 2 Flash
- 3 Lens
- 4 Microphone (P40, P66)
- 5 Self-timer Indicator (P40)
- 6 Strap Eyelet (P18)
- 7 Lens Tube



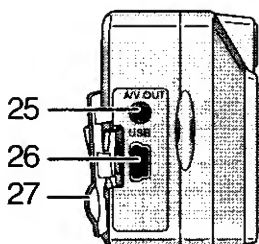
[UP View]

- 8 Mode Dial (P22)
- 9 Single/Burst Mode Button (P52)
- 10 Shutter Button (P21)
- 11 Power Switch (P17)
- 12 Zoom Button (P30, P31)



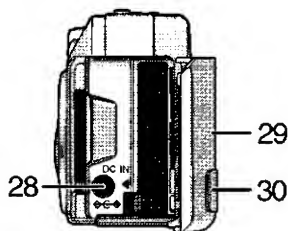
[Back View]

- 13 Optical finder (P19)
- 14 Status Indicator (P17)
- 15 Flash/Access Indicator
- 16 Speaker (P54)
- 17 DISPLAY Button (P20)
- 18 LCD Monitor (P8)
- 19 MENU Button (P23)
- 20 Delete Button (P28, P58)
- 21 Self-timer Button (P40) /
◀ Button
- 22 REVIEW/SET / ▼ Button (P28)
- 23 Flash Mode Button (P32) /
▶ Button
- 24 Exposure Compensation Button
(P44) / ▲ Button



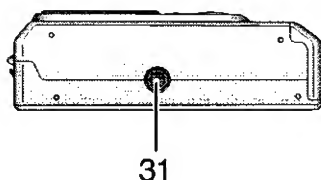
[Right View]

- 25 A/V OUT Socket (P76)
- 26 USB Socket (5pin) (P78)
- 27 Terminal Door (P13)



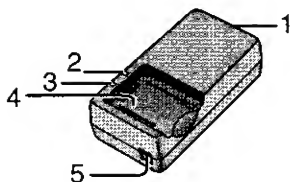
[Left View]

- 28 DC IN Socket (P13)
- 29 Memory Card/Battery Door (P12, P15)
- 30 DC IN Terminal Door (P13)



[Bottom View]

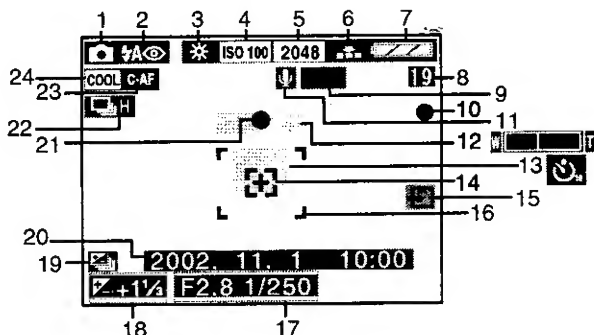
- 31 Tripod Receptacle (P19)




[AC Adaptor]

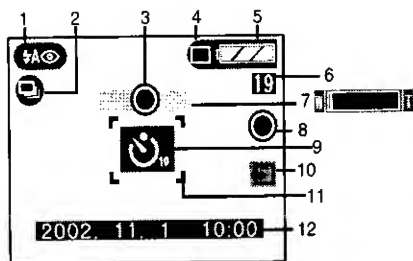
- 1 AC Input Terminal
- 2 [Power] Indicator
- 3 [Charge] Indicator
- 4 Battery Attachment Part
- 5 DC Output Terminal

LCD Monitor Display



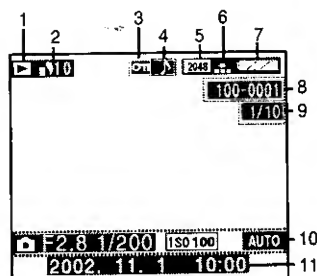
[In recording]

- | | |
|---|--|
| 1 REC mode | 19 Auto bracket (P45) |
| 2 Flash mode (P32) | 20 Current date and time (P24) |
| 3 White balance (P48) | • It is displayed for about 5 seconds after turning on the power or setting the clock. |
| 4 ISO sensitivity (P50) | 21 Focus indication (P30) |
| 5 Picture size (P37) | 22 Burst mode (P52) |
| 6 Quality (data compression ratio) (P38) | 23 Color Effect mode (P54) |
| 7 Battery indicator (P13)
(When using AC adaptor this is not displayed) | 24 Continuous AF (P34) |
| 8 Frame/Time remain
In motion image mode: XXXs | |
| 9 Shutter Jiggle alert | |
| 10 Recording indication | |
| 11 Audio REC (P40) | |
| 12 Zoom (P30, P31)
(digital zoom ON: ) | |
| 13 Self-timer mode (P40) | |
| 14 Spot metering target and Spot AF area in the Spot mode (P42) | |
| 15 Card access indication(P17) | |
| 16 AF area (P42) | |
| 17 Aperture indication/Shutter speed indication(P44) | |
| 18 Exposure compensation (P44) | |



[In recording in Simple mode]

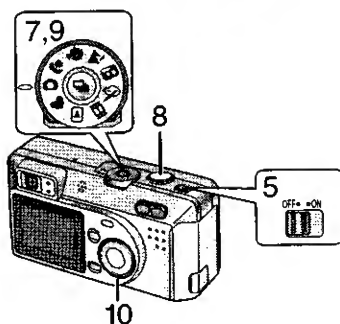
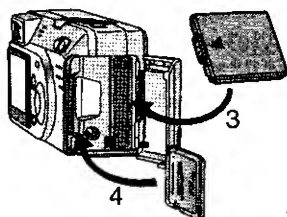
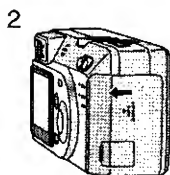
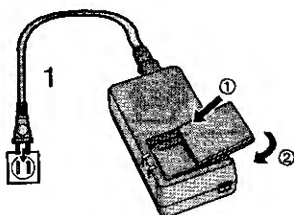
- 1 Flash mode(P32)
- 2 Burst mode(P52)
- 3 Focus indication(P30)
- 4 Usage for picture(P27)
- 5 Battery indicator(P13)
- 6 Frame/Time remain
- 7 Zoom(P30, P31)
- 8 Recording Indication
- 9 Self-timer mode(P40)
- 10 Card access indication (P17)
- 11 AF area(P42)
- 12 Current date and time(P24)
 - It is displayed for about 5 seconds after turning on the power or setting the clock.



[In playback]

- 1 Playback mode
- 2 DPOF (P60)
 - (White): DPOF setting for printing
 - (Green): DPOF setting for Slide Show
 - (Green with DPOF number): DPOF setting for printing and Slide Show
- 3 Protected image (P63)
- 4 Image with audio (P54)
- 5 Picture size (P37)
- 6 Quality (data compression ratio) (P38)
 - : In motion image mode
 - In simple mode:
 - : ENLARGE
 - : 4x6"/10x15cm
 - : INTERNET
- 7 Battery Indicator (P13)
- 8 Folder/File number
- 9 Page/Total images
- 10 REC data
 - It will be displayed when the [DISPLAY] button is pressed.
- 11 Recorded date and time

Quick Guide



Prepare the following items.

- Camera
- Battery
- Memory Card
- AC adaptor
- AC cable

Check that the power switch is set to [OFF] and the lens is stored.

[Preparation]

- 1 **Charge the battery.** (① → ②) (P13)
•Charging is finished in 80 minutes.
- 2 **Slide the lever in the direction of the arrow to open the Memory Card/Battery door.**
- 3 **Insert the battery into the camera.** (P12)
- 4 **Insert the Memory Card into the camera.** (P15)
- 5 **Set the power switch to [ON].** (P17)
- 6 **Close the Memory Card/Battery door.**

[Recording]

- 7 **Set date/time.** (P24)
- 8 **Set the mode dial to Normal recording mode .** (P22)

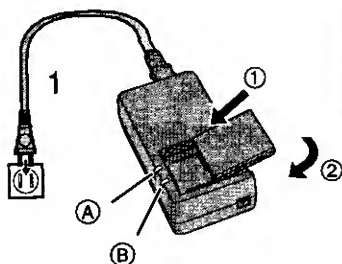
- 9 **Take pictures.** (P21)

[Playback]

- 10 **Set the mode dial to playback [▶].** (P53)
- 11 **Press ◀/▶ to select the picture you want to view.**

Charging the Battery

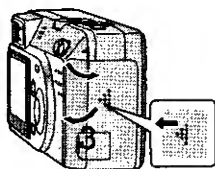
- 1 **Connect the AC cable.**
 - Do not connect the DC cable during charging.
 - The [POWER] indicator (A) lights.



THE SOCKET OUTLET SHALL BE INSTALLED NEAR THE EQUIPMENT AND SHALL BE EASILY ACCESSIBLE.

- 2 **Attach the battery to the AC adaptor.**
(1 → 2)
 - The [CHARGE] indicator (B) lights and charging starts.
- 3 **When the [CHARGE] indicator (B) stops lighting, charging is finished.**
- 4 **Remove the battery from the AC adaptor.**
 - The battery becomes warm after use or charging. The camera also becomes warm during use. However, it is not malfunction.

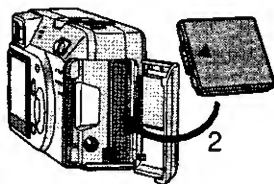
Inserting the Battery



[Preparation]

- Check that the power switch is set to [OFF] and the lens is stored.

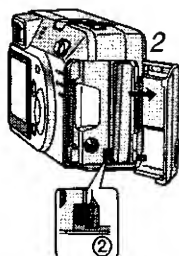
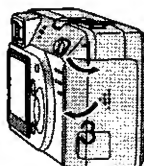
- 1 Slide in the direction of the arrow to open the Memory Card/battery door .
- 2 Insert the charged battery all the way in, until it is locked.
- 3 Close the Memory Card/battery door.



[Removing the battery]

- 1 Open the Memory Card/battery door.
- 2 Press the lock ② in the direction of the arrow to remove the battery.
- 3 Close the Memory Card/battery door.

.....



- If you will not be using the camera for a long time, remove the battery. (When you insert the battery again, set the date)
- Before removing the battery from the camera, set the power switch to [OFF].
- The battery supplied with this camera is exclusively designed for this camera. Do not use with any other equipment.
- Close the flash.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

■ Battery indicator

The remaining battery power is displayed on the LCD Monitor. (This is not displayed when using AC adaptor)



: The battery power is sufficient



: The remaining power is a little low



: The remaining power is low



: Recharge or replace the battery

■ Charging time and available recording time

(LCD on, shooting once every 30 seconds, flash every other shot. Measured using supplied 16 MB SD Memory Card)

	Charging time	Continuous recording/playback time (recordable number)
Supplied battery pack	Approx. 80 min.	Recording with LCD monitor Approx. 100 min. (equal to 200 still pictures)
		Recording with Viewfinder Approx. 120 min. (equal to 240 still pictures)
		Playback time Approx. 120 min.

The times shown in the table are approximate times. The times may vary depending on the condition.

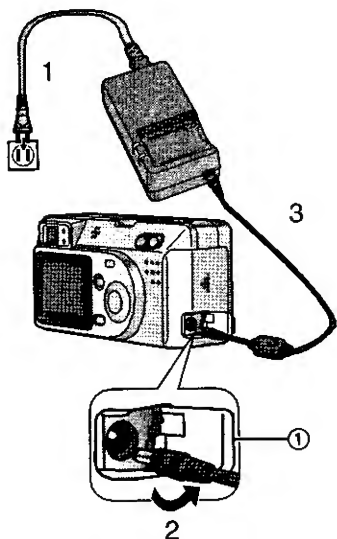
■ Charging environment and charging error

- Charge the battery in a place with a temperature of 50 - 95 F (10 - 35 °C). (The battery should also be the same temperature)
- When charging starts, the [CHARGE] indicator lights. If, after charging starts, the [CHARGE] indicator blinks at about 1 second cycles, this indicates a charging error. In this case, remove the AC adaptor from the electrical outlet, remove the battery and check if both room and battery temperature is too low or high and then charge it again. If the problem persists, consult the dealer or your nearest servicerentre.

Connecting to an Electrical Outlet

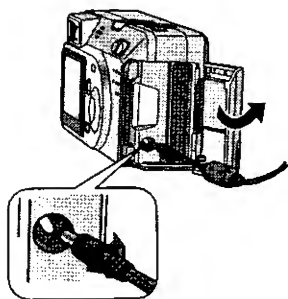
If you use an AC adaptor and connect it to an electrical outlet, you can use the camera without worrying about battery discharge.

- During use, the camera becomes warm; this is not a malfunction.



- 1 **Connect the AC cable.**
- 2 **Open the DC IN terminal door ①.**
- 3 **Connect the DC cable to the camera.**

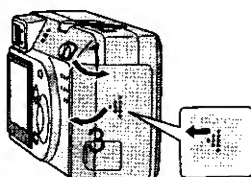
- Disconnect the AC adaptor and DC cable.
- The battery cannot be charged in the camera with the AC adaptor connected.



Inserting the Card

[Preparation]

- Check that the power switch is set to [OFF] and the lens is stored.

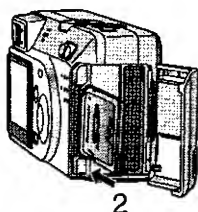


1 Slide in the direction of the arrow to open the Memory Card/battery door .

2 Insert the card all the way in until it clicks.

- Check the direction of the card.
- Do not touch the connection terminals on the back side of the card.

3 Close the Memory Card/battery door.



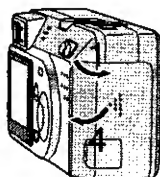
[Removing the card]

1 Slide in the direction of the arrow open the Memory Card/battery door.

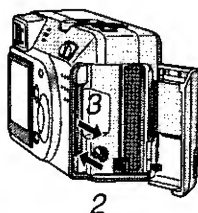
2 Press the card to release.

3 Pull the card out.

4 Close the Memory Card/battery door.

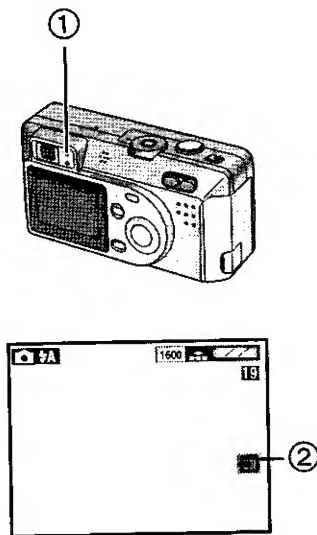


- Remove the card after turning off the power.
- If the Memory Card door cannot completely close, take the card out and insert it again.
- If the card cannot be fully inserted, verify whether the direction of the card is correct.
- We recommend that you use a Panasonic branded SD Memory Card. (Use only the genuine card)



Access to the card

When the card is being accessed, the Status indicator ① lights and card access indication ② lights.



When the card access indication lights ②, do not remove the battery or pull out the card. The card and the card contents may be destroyed and the camera may not operate normally.

There is a risk that the data on the card may be damaged or erased due to the electrical noise, static electricity or the defects of camera/card, please back up your data to your PC using USB connection. (P78)

Do not disconnect the DC cable when using the AC adaptor.

SD Memory Card (supplied) MultiMediaCard (optional)

The SD Memory Card and MultiMediaCard are small, light removable external cards. The Memory Card is equipped with a protection switch that can inhibit writing and formatting. (When the switch is moved towards the [LOCK] side, it is possible to write or delete data on the card and format it. When the switch is unlocked, these functions become available)

SD Memory Card

- RP-SDH512 (512MB)
- RP-SDH256 (256MB)
- RP-SD128B (128MB)
- RP-SD064B (64MB)
- RP-SD032B (32MB)
- RP-SD016B (16MB)
- RP-SD008B (8MB)

MultiMediaCard

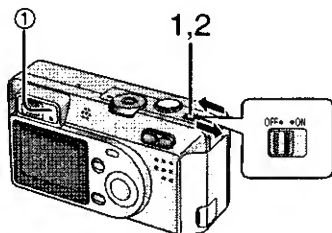
- After recording motion images using the MultiMediaCard, the screen may appear grey, but this is not a malfunction.

Turning Power on/off

1 Set the power switch to [ON].

- The Status indicator ① lights.

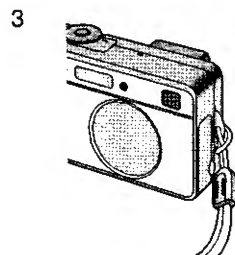
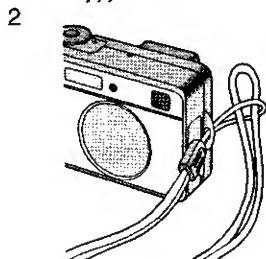
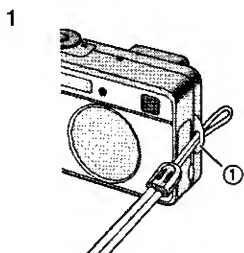
2 Set the power switch to [OFF].



- When turning on the power in the recording mode, do not put any obstacle in front of the lens.
- Do not make a pressure on the lens when the lens tube comes out. Confirm that the lens is put in when you wipe the lens.
- When you use the digital camera on a beach or similar place, do not let sand or fine dust get into the camera.

Attaching the Strap

- 1 Let the top of the strap pass through the strap eyelet.①
- 2 Let the opposite side of the strap pass through its ring shaped part.
- 3 Pull the strap.

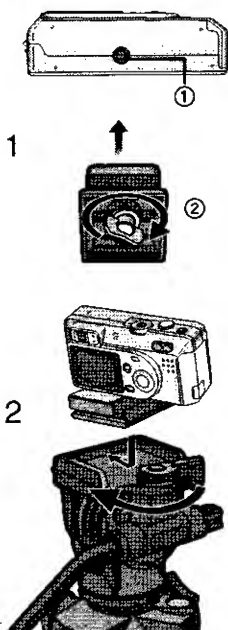


Using the Tripod

Using a tripod (customer supplied), can minimize or eliminate picture motion jitter associated with physical movement. This is especially true when in the tele position or when using slow shutter speeds.

[Preparation]

- Set the power switch to [OFF] and the lens tube is stored.

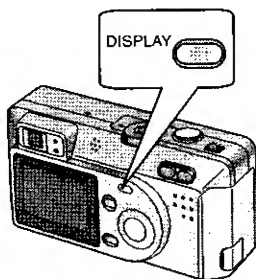


- 1 **Align the camera holder ② with the tripod receptacle ① of the camera and attach.**
- 2 **Install the camera holder into the tripod.**

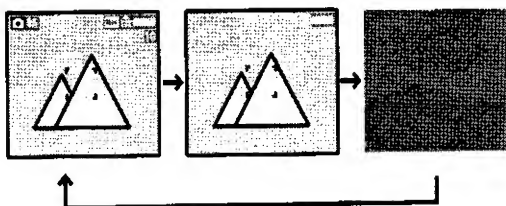
- When using a tripod, the card or the battery cannot be removed.
- Read the tripod operating instructions carefully.

Using the LCD Monitor

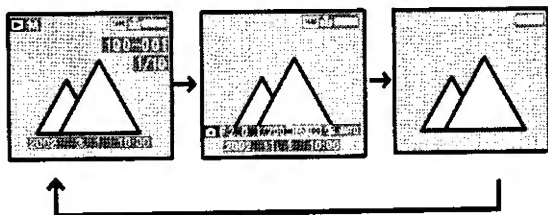
Every time you press the [DISPLAY] button, the display of the LCD Monitor changes as shown below.



[In recording]



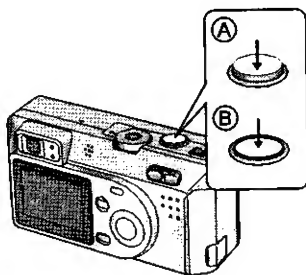
[In playback]



The Shutter Button

(Pressing halfway/Pressing fully)

The shutter button is pressed in 2 steps: "pressing halfway" and "pressing fully".



Pressing halfway (A)

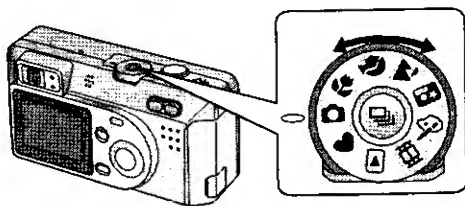
- Focus and exposure are locked.

Pressing fully (B)

- The picture is captured. In motion image mode, the recording starts.
- You can adjust volume of the operational sound in the menu. (P72)
- If you press the shutter button fully in a single stroke, the captured picture may appear shaken or unfocused. (The camera may be moved during capturing)


The Mode Dial

You can choose a desired mode by the mode dial.



 : Playback (P53)


Playback recorded images.

 : Simple mode (P27)

You can take the pictures easily because the necessary setting menus are minimized. This mode is for beginners.

 : Normal Picture (P30)

The shutter speed and the aperture value are automatically adjusted. Also the settings can be adjusted is limited. This mode is for beginners.

 : Macro mode (P51)

When you take pictures from a distance closer than 3.28 feet (1 m), set the camera in macro mode. This allows you to get closer to the subject up to 0.1 feet (3 cm).

 : Portrait mode (P39)

Portrait mode lets you achieve the depth of focus effect easily when you take portrait photos. The subject looks sharp and outstanding with an unfocused background.

 : Landscape mode: (P40)

You can get the sharp and crisp landscape photo easily. Please note that this mode is suitable for the landscape farther than 10 m and in daylight situation.

 : Night portrait mode (P41)

When you take pictures of, for example, your friends in front of beautiful night illumination scenery, this mode let you get the appropriate exposure for your subject as well as the background, using flash and slow shutter.

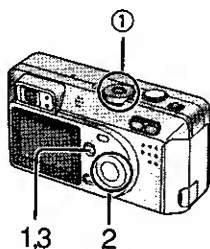
 : Color Effect mode (P43)

This function makes it able to use color effect such as bluish, reddish, and black and white.

 : Motion images (P29)

Recording motion images.

Operating the Menu

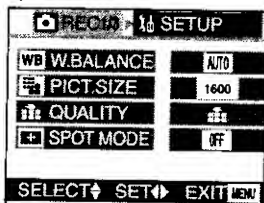


By operating the menu you can set the settings of REC or playback mode. You can also set the date and time, the operational sound and various other settings. Follow these instructions.

[Preparation]

- Set the mode dial to the recording mode (except for [♥]) or the playback mode.

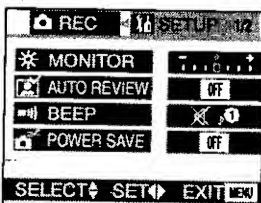
1



1 Press the [MENU] button.

- If you set the mode dial ① to the recording mode, the REC menu is displayed; if you set it to the playback mode, the playback menu is displayed.

2



2 Press ►.

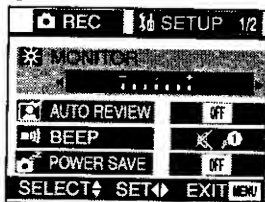
3 Press ▲/▼ to choose the item.

4 press ◀/▶ to set the item.

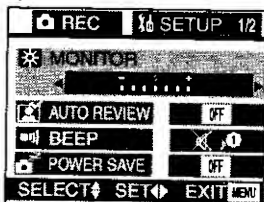
5 Press the [MENU] button.

- The menu will disappear.

3

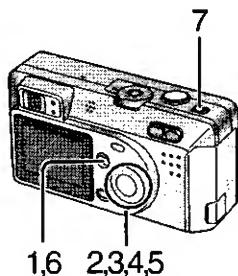


4

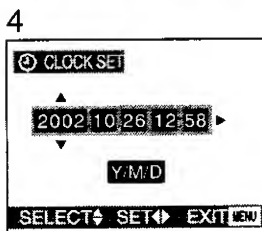
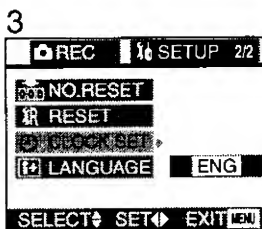


Setting the Date/Time (Clock Set)

You can set the year from 2002 to 2099. The 24-hour system is used.

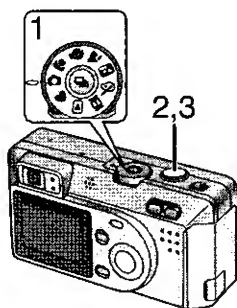


- 1 Press the [MENU] button.
- 2 Press ► to make the setup menu appear.
- 3 Press ▲/▼ to select [CLOCK SET], and then press ►.
- 4 Press ▲/▼/◀/► to set date and time, and then press ►.
- 5 Press ▲/▼ to select [M/D/Y], [D/M/Y] or [Y/M/D].
- 6 Press the [MENU] button twice.
 - The menu will disappear.
- 7 Check if the date/time setting is displayed correctly, after turning the camera [OFF] and [ON].



- If the message [PLEASE SET THE DATE/TIME] appears, set the date and time again. You can go back to the setup menu by pressing the [MENU] button during the message is displayed.

Taking Pictures



By only pressing the shutter button, the exposure (shutter speed and aperture value) will be automatically adjusted and the picture will be taken. You can take pictures when using the flash, in a dark place.

[Preparations]

- Insert the card. (P15)
- Set the power switch to [ON]. (P17)

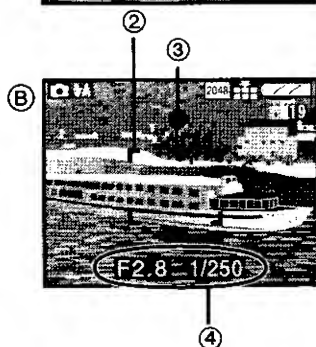
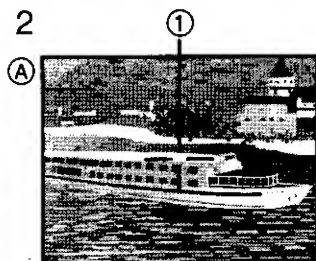
1 Set the mode dial to normal picture mode [P].

2 [A Optical finder]

Let the subject be centered in the AF target ① inside the optical finder and press the shutter button halfway.

[B LCD monitor]

After centering the subject in the AF area ② on the LCD Monitor, press the shutter button halfway.



- When the focus is adjusted, the focus indication [●] ③ appears.
- When the focus indication flashes, the focus is not adjusted. Press the shutter button halfway to adjust the focus again.
- The shutter speed and the aperture value ④ are automatically adjusted and displayed on the LCD Monitor.
- When the subject is out of the AF target or the AF area, use the AF/AE lock. (P46)

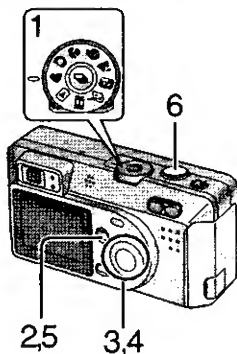
3 Press the shutter button fully to take the picture.

- After taking a picture, when the auto review (P71) is set to [ON], the picture is displayed on the LCD Monitor for about 1 or 3 seconds.

- If you press the shutter button fully at once, the shutter jiggle may occur or the focus may not be adjusted properly.
- Even when the focus indication is displayed and the focus is properly adjusted, it will be cancelled if you release the shutter button.
Press the button halfway again.
- When power saving time is set, if you do not operate the camera for a while, it is automatically turned off at the set time. To operate the camera again, press the shutter button or turn the power switch first to [OFF] and then to [ON]. (P73)
- There are times when the brightness of the LCD Monitor differs from that of the recorded pictures. In particular, when taking pictures in dark places with a long time exposure, darkness appears on the LCD Monitor, but the recorded pictures are bright.
- If the exposure is not properly set, the color of the aperture value and the shutter speed becomes red.
- In the following cases, the focus is not adjusted properly.
 - 1 Recording a scene including subjects both near and far
 - 2 Recording a scene over the dirty glass
 - 3 Recording surrounding a shining scene
 - 4 Recording in a dark place
 - 5 Recording moving subject
 - 6 Recording a subject with a little contrast
- We recommend that you set the clock setting again before taking pictures.
- When setting the flash to Slow sync./Red-eye reduction or Forced OFF and taking a picture in a dark place, we recommend that you use the tripod to prevent the shutter jiggle.

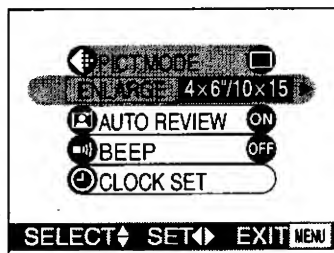
Taking Pictures in Simple Mode

- Offering simplified menu for ease of use.
- The picture size is easy to select.
- The icons on the display are shown larger.
- We recommend you to use this mode when you ask someone to take a picture.



- 1 Set the mode dial to the Simple mode [📷]
- 2 Press the [MENU] button.
- 3 Press ▲/▼ to select [PICT. MODE].
 - [AUTO REVIEW] (P71)
 - [BEEP] (P72)
 - [CLOCK SET] (P24)
- 4 Press ▲/▼ to select [ENLARGE], [4x6"/10x15cm], [INTERNET].

ENLARGE	2048x1536	Fine
4x6"/10x15cm	1280x960	Fine
INTERNET	640x480	Standard

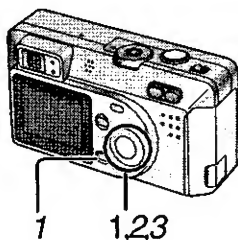


- 5 Press the [MENU] button.
- 6 Take a picture.
 - The recording method is the same as in "Taking Pictures". (P30)



- The burst mode is available only with Low speed [📷].
- If the distance between the camera and the object is beyond the recordable range, the focus may not be adjusted properly even the focus indication ① is lighting.

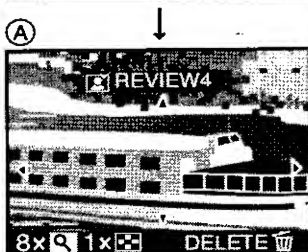
Checking the Captured Picture (Review)



After taking a picture, when auto review is set to [ON], the captured picture is displayed on the LCD Monitor for about 5 seconds, but you can also check the picture by following the methods shown below.

1 After taking a picture, press the \blacktriangledown /[REVIEW/SET] button.

- The last captured picture is displayed for about 5 seconds. press the zoom button [Q], the captured picture is zoomed 4 times (A) and 8 times if you press it again. You can also change the position with \blacktriangle / \blacktriangledown / \blacktriangleleft / \blacktriangleright .
- You can check the previous or following picture with \blacktriangleleft / \blacktriangleright .



Erasing the captured picture during the review

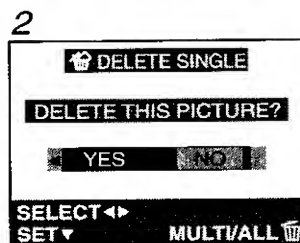
1 Press the [trash] button.

2 When the message [DELETE THIS PICTURE?] is displayed, press the [YES] button to select [YES].

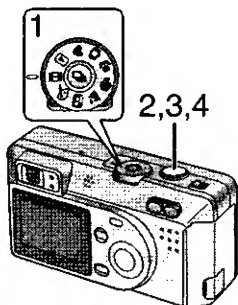
3 Press the \blacktriangledown /[REVIEW/SET] button

- The picture is erased.
- Once erased, pictures cannot be recovered.

• In motion image mode [M], Review cannot be used..



Recording Motion Images

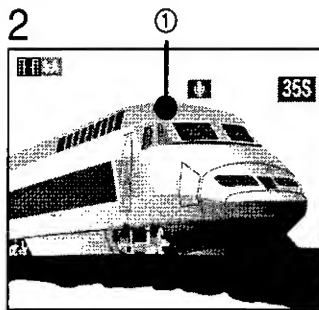


With this camera you can also record motion images. (If using the supplied 16MB SD Memory Card, it is possible to record for about 79 seconds)

[Preparations]

- Insert the card. (P15)
- Set the power switch to [ON]. (P17)

- 1 Set the mode dial to motion image mode [RECORDING].**
- 2 Center the subject in the AF area on the LCD Monitor and press the shutter button halfway.**
 - When the focus is adjusted, the focus indication ① [●] appears.
- 3 By pressing the shutter button fully, the recording starts.**
 - The audio REC starts simultaneously.
- 4 By pressing the shutter button fully again, recording stops.**

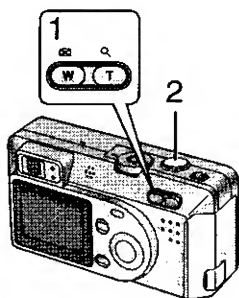


In motion image record mode, the settings listed below are not available

- Picture size (P37)
- Built-in flash (P32)
- White balance (P48)
- ISO sensitivity (P50)
- Audio recording

- The remaining time displayed on the LCD Monitor is an approximation.
- You cannot record motion images without audio.
- If using the MultiMediaCard, after recording motion images, the screen may appear grey, but this is not a malfunction.
- After recording starts, the auto focus and zoom are locked (with the first frame).
- Recording could suddenly stop when recording motion images with some kinds of the card.
- When playing back the motion image that have been recorded with this digital camera, the quality of pictures may be deteriorated or pictures may not be able to be played back.
- In motion image mode [RECORDING], review cannot be used.

Using the Optical Zoom



With this function, you can make people and subjects closer, and landscapes can be captured in wide angle, with the 3 times optical zoom.

[Preparation]

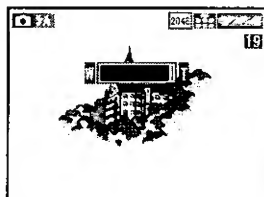
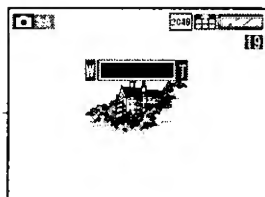
- Set the mode dial. (P22)

- 1 **Aim the camera at the subject and adjust the size with the zoom button.**
To make subjects closer (Tele):
Press the zoom button (T).
To make subjects wider (Wide angle):
Press the zoom button (W).

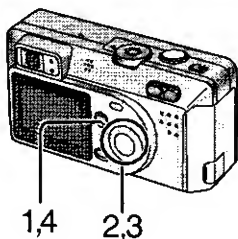
- 2 **Take pictures.**

- The recording method is the same as in "Taking Pictures". (P30)

- The focus is adjusted at a distance of more than 1.64 feet (50 cm). For details on Macro mode, read P51.



Using the Digital Zoom



It is possible to further magnify a subject already magnified 3 times with the optical zoom by 3 more times, with the digital zoom, thereby reaching a maximum of 9 times.

[Preparation]

- Set the mode dial. (P22)

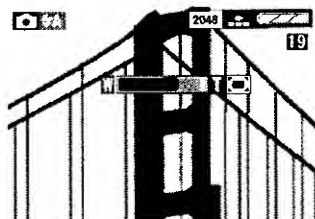
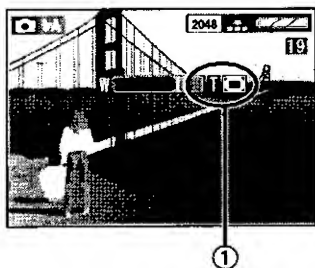
- 1 Press the [MENU] button.
- 2 Press $\blacktriangle/\blacktriangledown$ to select [D. ZOOM].
- 3 Press $\blacktriangleleft/\blacktriangleright$ to set to [ON].
- 4 Press the [MENU] button.

- The menu will disappear.

2,3



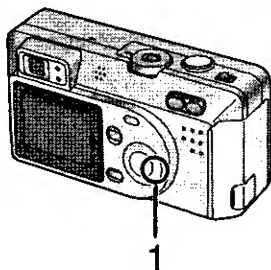
- The zoom adjustment and recording method are the same as in "Using the Optical Zoom". (P30)
- When the digital zoom is set to [ON], the digital zoom indication ① appears.
- In the Simple mode [\heartsuit], you cannot use the digital zoom.
- When using the digital zoom the picture quality becomes deteriorated.



Taking Pictures with the Built-in Flash

[Preparation]

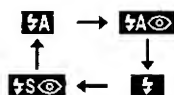
- Set the mode dial except for [P]. (P22)



1 Press [Flash Release].

- Every time you press [Flash Release], the available settings will appear as shown below. (There are settings that cannot be set according to the REC mode. Those that cannot be set are not displayed when pressing [Flash Release]. Refer to the table on the left.)

	Flash	Flash + Red-eye	Flash Off	Flash On	Flash Off
Heart	—	○	○	—	○
Camera	○	○	○	○	○
Movie	○	○	○	○	○
Flash	○	○	○	○	○
Flash	○	○	○	—	○
Flash	—	—	—	○	—
Flash	○	○	○	○	○
Flash	—	—	—	—	○



Flash : AUTO

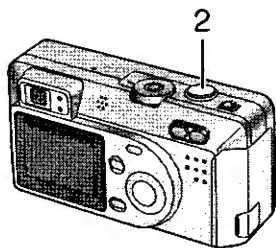
The flash fires automatically according to the recording situation.

Flash + Red-eye : AUTO/Red-eye reduction

The flash fires automatically according to the recording situation and simultaneously it reduces the red-eye phenomenon (when a subject's eyes appear red in flash light). Use it when you take pictures of people or animals in dark places.

Flash Off : Forced ON

The flash fires in every capturing. Use this setting when your subject is backlit or under fluorescent light.



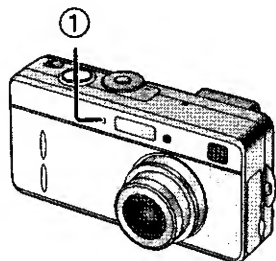
[Flash icon]: Slow sync./Red-eye reduction

When you take a picture with a dark background landscape, it makes the flash fire and the shutter speed slow, so that the dark background landscape will become bright. Simultaneously it reduces the red-eye phenomenon.

[Flash icon]: Forced OFF

Even being in dark places, the flash does not fire.

Set it when you take pictures in places where using flash is not allowed.

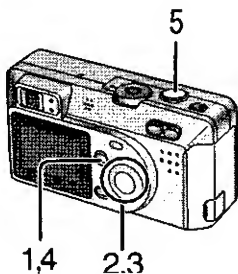


2 Take pictures.

- The recording method is the same as in "Taking Pictures". (P30)

- The available flash range is about 0.98 feet (30 cm) - 6.86 feet (2.1 m).
- Do not cover the flash sensor ① with your fingers or other items. Otherwise, brightness cannot be perceived.
- In motion image mode [M], setting is fixed to the Slow sync./Red-eye reduction [Flash icon].
- When you set to burst mode [L/H] or auto bracket, only 1 picture is taken for every flash firing.
- In night portrait mode [Star icon], setting is fixed to the Slow sync./Red-eye reduction [Flash icon].
- The flash indication becomes red when pressing the shutter button halfway.
- The flash indication blinks red during the flash is charged.

Using the Continuous AF



Using this function, you can adjust the focus soon even if the subject changes because the auto focus works continuously.

[preparation]

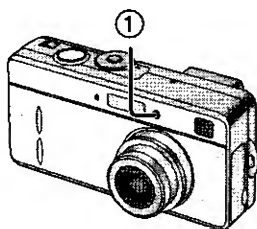
Set the mode dial except for []/[]. (P22)

- 1 Press the [MENU] button.
- 2 Press $\blacktriangle/\blacktriangledown$ to select [CONT.AF] and press \blacktriangleright .
- 3 Press $\blacktriangleleft/\blacktriangleright$ to select [ON].
- 4 Press the [MENU] button.
 - The menu will disappear.
- 5 Take a picture.

• The recording method is the same as in "Taking Pictures". (P30)

- In the Simple mode, [CONT.AF] is fixed to [OFF].
- The battery consumes approximately at double the speed.
- It may take time to adjust the focus after zooming (Wide \rightarrow Tele)/panning/tilting.
- Press the shutter button halfway again to adjust the focus when the focus is difficult to be adjusted.
- The focus may be difficult to be adjusted in the dark place.

Taking Pictures with the Self-timer



When you set the self-timer, the picture is automatically taken after 10 seconds (or 2 seconds).

[Preparation]

- Set the mode dial. (P22)

1 Press the [ON] button.

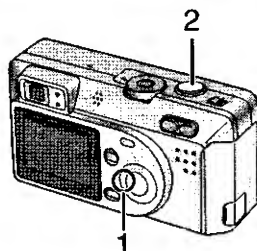
- Every time you press it, what is displayed changes as shown below.



: Self-timer set to 10 seconds

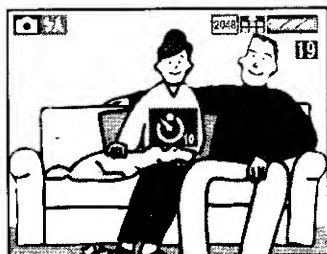
: Self-timer set to 2 seconds

When these indicators are not displayed, self-timer setting is cancelled.



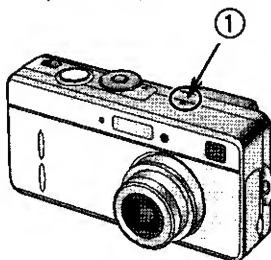
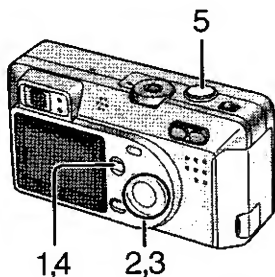
2 Press the shutter button fully.

- The self-timer indicator ① blinks and the shutter is activated after 10 seconds (or 2 seconds).
- When setting the self-timer, the focus and exposure are not adjusted by pressing the shutter button halfway. When pressing the button fully, they are automatically adjusted just before recording.
- If you press the [MENU] button during the self-timer is set, the self-timer setting is cancelled.



- In simple mode [], you can only set to 10 seconds [].
- In motion image mode [], it is not possible to use the self-timer.
- In burst mode [L] / [R], the self-timer setting applies to the first picture only.
- We recommend that you use the tripod when setting the self-timer.

Taking Pictures with Audio



You can take a picture with audio for 5 seconds.

[Preparation]

- Set the mode dial except for []/[]. (P22)

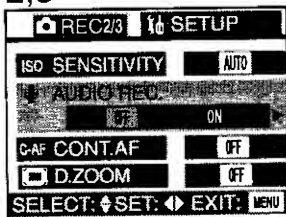
- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [AUDIO REC.].
- 3 Press ◀/▶ to set to [ON].
- 4 Press the [MENU] button.

- The menu will disappear.
- This icon [] will appear on the LCD Monitor.

- 5 Press the shutter button fully and take a picture.

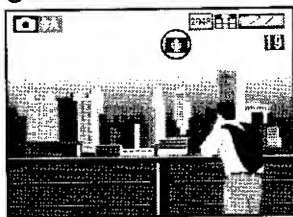
- It is not necessary to continue pressing the shutter button.
- Audio is recorded from the built-in microphone ① of the camera.
- 5 seconds later, the audio recording is stopped automatically.
- If you press the [MENU] button during the audio recording, it will be cancelled.

2,3



- When setting to the Simple mode, burst mode or auto bracket, it is not possible to take a picture with audio. (P38, P45, P52)

5

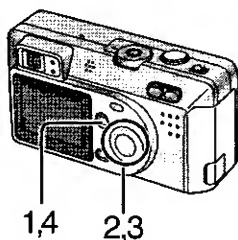


Changing the Picture Size

You can choose among 4 picture size settings.

[Preparation]

- Set the mode dial except for []/[]. (P22)



- 1 Press the [MENU] button.
- 2 Press $\blacktriangle/\blacktriangledown$ to select [PICT. SIZE].
- 3 Press $\blacktriangleleft/\blacktriangleright$ to select the picture size.

- [2048]: 2048 \times 1536 pixels
- [1600]: 1600 \times 1200 pixels
- [1280]: 1280 \times 960 pixels
- [640]: 640 \times 480 pixels

- 4 Press the [MENU] button.

- The menu will disappear.

2,3



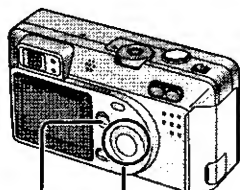
- In motion image mode [], the picture size is fixed to 320 \times 240 pixels.
- In simple mode [], the picture size cannot be selected.
- The smaller you set the picture size, the more pictures you can store on the Memory Card. In addition, a small data volume allows you attach the picture to an e-mail or post it on a web site more easily.
- If you set a larger picture size, the printed picture will be clearer, especially with larger sized prints.

Changing the Quality (Data Compression Ratio)

You can choose among 2 quality levels (Data Compression Ratio).

[Preparation]

- Set the mode dial except for [] [] [].
(P22)



2,3



- Press the [MENU] button.
- Press ▲/▼ to select [QUALITY].
- Press ◀/▶ to select the quality (Data Compression Ratio).

- : Fine (Low compression)
It gives priority to picture quality to record high quality pictures.
- : Standard (Standard compression)
It gives priority to the number of recordable pictures and records standard quality pictures.

- Press the [MENU] button.

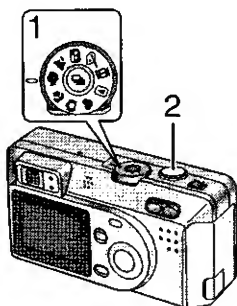
- The menu will disappear.

- Picture size/Quality and number of recordable pictures (16MB/64MB SD Memory Card)

Picture size	Quality			
	16MB		64MB	
2048 x 1536	10	20		
1600 x 1200	15	30		
1280 x 960	29	56		
640 x 480	64	113		
In motion image mode	Approx. 79 s		Approx. 00 s	

- In motion image mode [], quality cannot be modified.
- In simple mode [], the quality cannot be selected.
- It may happen that pictures appear like a mosaic depending on the scene characteristics.
- If you mix fine quality and standard quality, the number of recordable pictures changes
- Remaining frame which is displayed on the LCD Monitor may not correspond with recorded frames, however, this is not a malfunction.

Taking Pictures with the Portrait Mode



Portrait mode allows you to achieve the depth of focus effect easily when you take portrait photos. The subject looks sharp and outstanding against an unfocused background. It will be best place the subject much closer and allow for proper distance between subject and background. Please note that this mode is suitable for outdoor situations under sunlight. When you view the subject under differing lighting situations, you may need to open the flash. Flash mode will be [Forced ON] in the default position and you can also select [Auto/Red-eye reduction]. ([AUTO] can not be selected in this mode.)



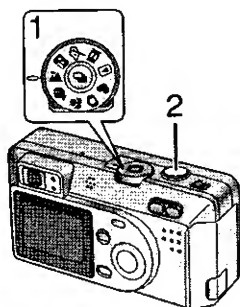
- 1 Set the mode dial to Portrait mode [P].
- 2 Take a picture.

- The recording method is the same as in "Taking Pictures". (P30)

- White balance is set to [AUTO]. You can change the setting.

Taking Pictures with the Landscape Mode

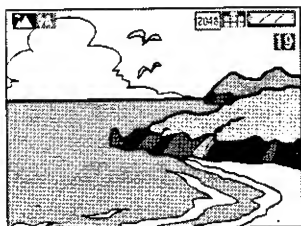
You can get the sharp and crisp landscape photo easily. Please note that this mode is suitable for the landscape **farther than 10 m** and in **daylight** situation.



1 Set the REC mode dial to Landscape mode [🏔️].

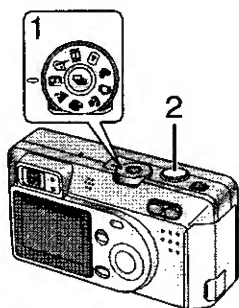
2 Take a picture.

The recording method is the same as in "Taking Pictures". (P30)



- White balance is set to [AUTO]. You can change the setting.

Taking Pictures with the Night Portrait Mode

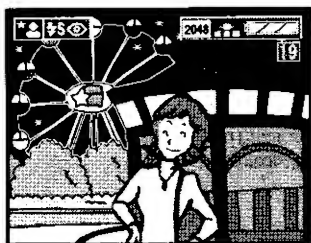


The Night Portrait mode combines the electronic flash with a "slow shutter" mode. This unique feature allows you to photograph close subjects against the natural night background. Since the shutter speed is slow, we highly recommend using a tripod to steady the camera. The subject should be positioned within the recommended distance for the camera's flash can illuminate. (about 0.98 feet (30cm) - 6.86 feet (2.1m)) We recommend you to set the zoom lever towards W.

1 Set the mode dial to Night portrait mode [👤🌙].

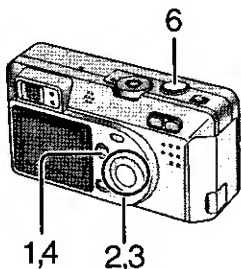
2 Take a picture.

- The recording method is the same as in "Taking Pictures". (P30)

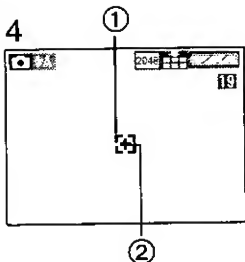


- Flash setting is fixed to Slow sync./Red-eye reduction [👤🌙👁].
- White balance is set to [AUTO]. You can change the setting.

Taking Pictures with the Spot Mode



2,3



When this mode is selected, both autofocus area and exposure will be set to spot mode. This is suitable when you take pictures in delicate light conditions and intend to spot on a limited area.

[Preparation]

- Set the mode dial except for

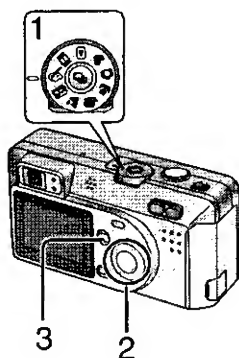



- Press the [MENU] button.
- Press $\blacktriangle/\blacktriangledown$ to select [SPOT MODE].
- Press $\blacktriangleleft/\blacktriangleright$ to set to [ON].
- Press the [MENU] button.
 - The menu will disappear.
 - The spot AF area ① and spot metering target ② appears.
- Center the subject in the spot AF area.
- Take a picture.

- The recording method is the same as in "Taking Pictures". (P30)

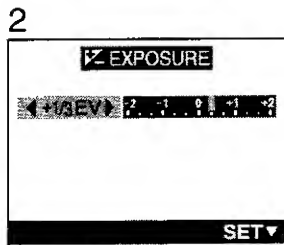
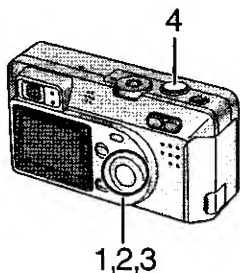
- In motion image mode [MOVIE], it is not possible to record with spot AF.
- Focus is fixed to spot AF.
- Surroundings become dark or whitish depending on the subject to set to appropriate exposure in the spot AF area.
- If the subject is out of the spot AF area, use the AF/AE lock.

Taking Picture with the Color Effect Mode



- 1 Set the mode dial to Color effect mode [].
- 2 Press **▲/▼/◀/▶** to select [OFF], [COOL], [WARM] or [B/W].
 - COOL: The picture becomes bluish.
 - WARM: The picture becomes reddish.
 - B/W: The picture becomes black and white.
- 3 Press the [MENU] button twice.
 - The menu will disappear

Compensating the Exposure



In some situations the illumination of the background and your subject may differ. Auto exposure systems may not always calculate the proper exposure correctly. This is a normal situation. This feature allows you to manually compensate the exposure.

[Preparation]

- Set the mode dial except for []/[]. (P22)

1 Press the [] button.

2 Press $\blacktriangle/\blacktriangleright$ to compensate the exposure.

- You can compensate from -2 EV to +2 EV with $\pm 1/3$ EV step.
(EV is an abbreviation of Exposure Value, and it is the amount of light given to the CCD by the aperture value and the shutter speed. EV0: the exposure capacity with the aperture value F1.0 and the shutter speed 1 second
When the aperture value or shutter speed rises, EV1, EV2, EV3... rise too.)

- The compensation state is not reflected on the LCD Monitor.

3 Press the \blacktriangledown /[REVIEW/SET] button.

- The compensation window will close.

4 Take a picture.

- The recording method is the same as in "Taking Pictures". (P30)

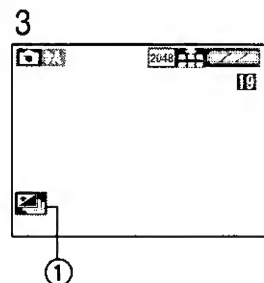
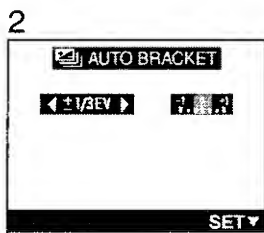
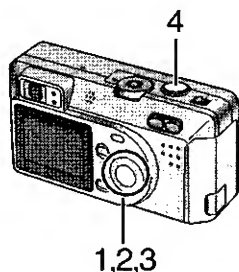
- Depending on the shutter speed and aperture value, the range which is possible to compensate the exposure will be limited.
- In simple mode [] or motion image mode [], it is not possible to compensate the exposure.

Taking Pictures with Auto (AE) Bracket

Pressing the shutter button once, the camera will automatically take 3 pictures changing exposure according to the set exposure compensation value.

[Preparation]

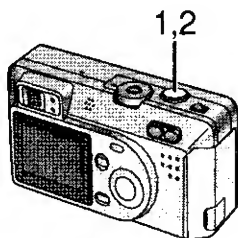
- Set the mode dial except for []/[]. (P22)



- 1 Press the [] button twice to select [] AUTO BRACKET.
- 2 Press </> to set the exposure compensation range.
 - OFF
 - -1EV — +1EV (compensate with 1/3 EV step)
- 3 Press the ▼/[REVIEW/SET] button.
 - The compensation window will close.
 - The auto bracket indication ① appears.
- 4 Take a picture.
 - The recording method is the same as in "Taking Pictures". (P30)

- Once you take a picture, auto bracket will be cancelled automatically.
- When flash fires, you can take only 1 picture.
- The digital zoom magnification is limited to 2 times.
- In simple mode [] or motion image mode [], auto bracket cannot be set.

Using the AF/AE Lock



If the subject is out of the AF area and you press the shutter button, the subject's focus is not adjusted. After locking focus and exposure (AF/AE lock), you can take a clear picture with adjusted focus.

AF: Auto focus

AE: Auto exposure

[Preparation]

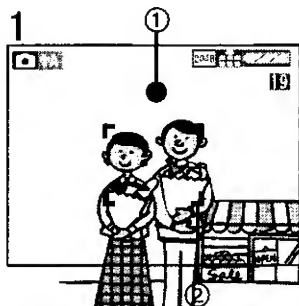
- Set the mode dial except for []/[]. (P22)

- 1 **Aim the camera at the subject on which you want to adjust the focus to enter the AF area ② on the LCD Monitor and then keep pressing the shutter button halfway (AF/AE lock) to set it.**

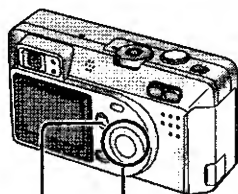
- When the focus is adjusted, the focus indication ① [●] appears.

- 2 **Move the camera keeping the chosen composition and press the shutter button all the way.**

- Before pressing the shutter button, you can set the AF/AE lock again and again.



Picture Adjustment (Natural/Standard/Vivid)



2,3



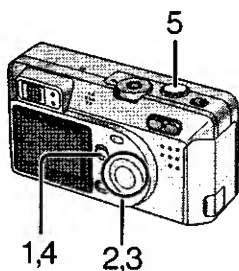
[Preparation]

- Set the mode dial except for []/[]. (P22)

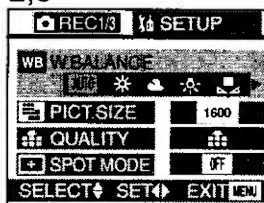
- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [PICT. ADJ.] .
- 3 Press ◀/▶ to select [NATURAL], [STANDARD] or [VIVID].
 - [NATURAL]: The picture becomes more soft.
 - [VIVID]: The picture becomes more sharp.
- 4 Press the [MENU] button.
 - The menu will disappear.

- In simple mode [] or motion image mode [], picture adjustment cannot be set.

Setting the White Balance



2,3



Auto White Balance is designed to automatically adjust the camera to produce natural flesh tones. In most situations it works fine. In some situations where several different types of lighting are present, enhanced performance can be achieved by setting the white balance manually.

[Preparation]

- Set the mode dial except for []/[]. (P22)

1 Press the [MENU] button.

2 Press ▲/▼ to select [W.BALANCE].

3 Press ◀/▶ to select the mode.

- AUTO: if the auto white balance is set
- ☀ (Daylight): for recording outdoors on a bright day
- ☁ (Cloudy): for recording under cloudy and shady sky
- 🔦 (Halogen): for recording under halogen lighting
- 📷 (White set): for manual setting (Read the following page where the manual setting is explained in detail)

4 Press the [MENU] button.

- The menu will disappear.

5 Take a picture.

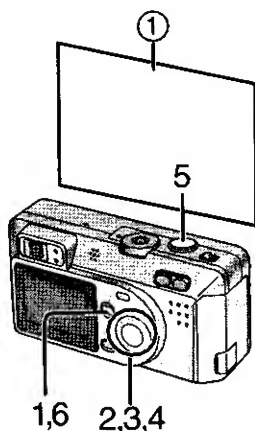
- The recording method is the same as in "Taking Pictures". (P30)

- In the simple mode [] or motion image mode [], the white balance is fixed to [AUTO].
- The setting of the white balance is applied to other recording mode.

Here the white set mode of white balance is explained.

[Preparation]

- Set the mode dial except for []/[]. (P22)



- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [W.BALANCE].
- 3 Press ◀/▶ to set to white set [].

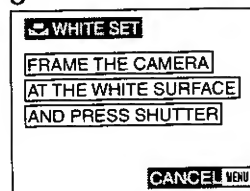
Only when setting the white balance again

- 4 Press ►.
 - 5 Aim the camera at a white paper ① or similar objects so that it completely fills the frame to white on the screen and press the shutter button all the way.
- White balance is set.
- 6 Press the [MENU] button.
- The menu will disappear.

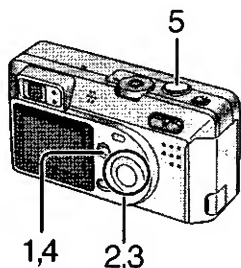
2,3



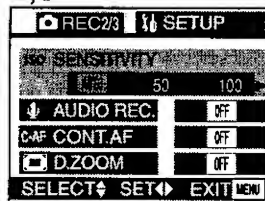
5



Setting ISO Sensitivity



2,3



ISO sensitivity is a value that corresponds to the sensitivity to light. The higher it is, the better the camera performs in dark places.

[Preparation]

- Set the mode dial except for

[] [] [] []. (P22)

- 1 Press the [MENU] button.
- 2 Press $\blacktriangle/\blacktriangledown$ to select [SENSITIVITY].
- 3 Press $\blacktriangleleft/\blacktriangleright$ to select the sensitivity.

- AUTO: The ISO sensitivity is automatically adjusted up to ISO 400. If your picture is still too dark, please use the flash.

- ISO50
- ISO100
- ISO200
- ISO400

- 4 Press the [MENU] button.

- The menu will disappear.

- 5 Take a picture.

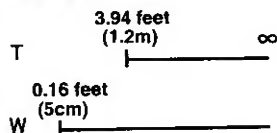
- The recording method is the same as in "Taking Pictures". (P30)

- In motion image mode [] or simple mode [], ISO sensitivity is fixed to [AUTO].
- When you take a picture in high ISO sensitivity, the picture noise appears and the picture quality deteriorates.

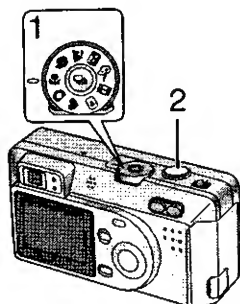
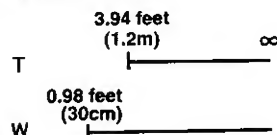
Taking Pictures with Macro Mode

If the camera lens is at a distance of 0.2 feet (6 cm) to 1.64 feet (50 cm) from the subject, set macro mode [M].

- Macro Mode [M]

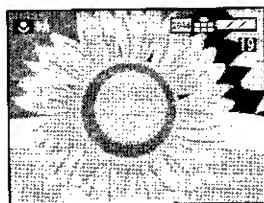


- Other than Macro Mode



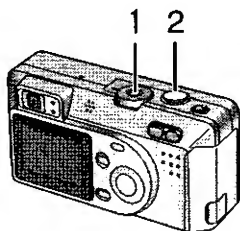
- 1 Set the mode dial to macro mode [M].
- 2 Take a picture.

- The recording method is the same as in "Taking Pictures". (P30)



- When the camera lens is at a distance over the available range from the subject, focus may not be adjusted even if the focus indication appears.

Taking Pictures with Burst Mode



By continuously pressing the shutter button, it is possible to record in burst mode.

	Number of recordable pictures		Shutter speed
H	5 frames	9 frames	4 frames/second
L	5 frames	9 frames	2 frames/second

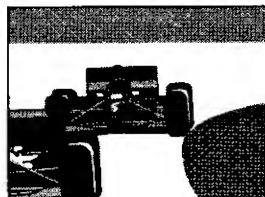
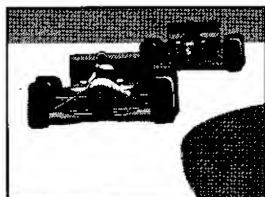
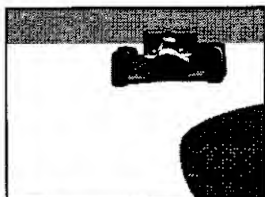
[Preparations]

- Set the mode dial except for and (P22)

1 Press .

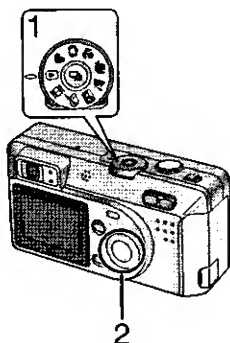
- You can select H] (High speed) or L] (Low speed).

2 Press the shutter button halfway to lock the focus, then press it fully to take pictures in sequence.



- It is possible to record 4 frames in 1 second in burst mode, at a shutter speed higher than 1/25, but the flash does not fire simultaneously.
- If the flash fires, it is possible to record only 1 frame.
- When quality is set to fine , it is possible to record a maximum of 5 frames in burst mode.
- In simple mode , the shutter speed cannot be selected.
- In motion image mode , the burst mode cannot be used.


Playing Back Still Pictures



1 Set the mode dial to playback [].

- The last recorded picture is played back.

2 Press to play back the previous picture.

Press  to play back the following picture.



- Every time you press, the previous (following) picture is played back.
- The picture following the last one is the first picture.

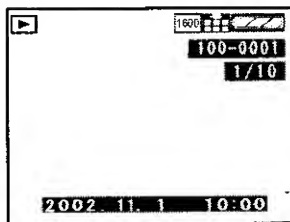
[Fast forwarding/Fast rewinding]

During playback, continue pressing  / .

 : Fast forward

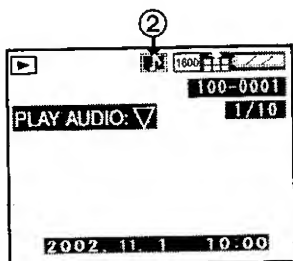
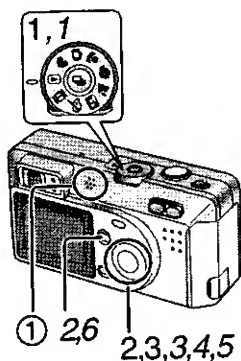
 : Fast rewind

- The file number increases/decreases. When releasing  / , the picture corresponding to the current file number is displayed.



- This camera is based on the DCF standards (Design rule for Camera File system) which were established by the Japan Electronic Industry Technology Association (JEITA).
- The file format that can be played back with this camera is JPEG. (There are also pictures that cannot be played back in JPEG format)
- When playing back still pictures that have been recorded with other equipment, the quality of pictures may be deteriorated and pictures may not be able to be played back.
- When playing back a file out of standard, the folder/file number is indicated by [-] and the screen becomes black.

Playing Back Still Pictures with Audio



Ⓐ



- 1 Set the mode dial to playback [▶].
- 2 Press ◀/▶ to select the file with audio icon [🔊] ②.
- 3 Press the ▼/[REVIEW/SET] button to played back the audio.
•You can hear audio from the speaker ①.

■ To adjust the sound volume. Ⓐ

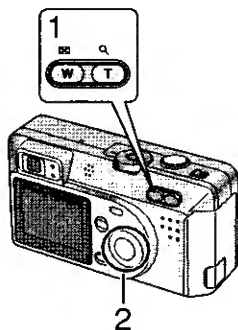
- 1 Set the mode dial to playback [▶].
- 2 Press the [MENU] button.
- 3 Press ▶ to select the setup menu.
- 4 Press ▲/▼ to select [VOLUME].
- 5 Press ◀/▶ to adjust the sound volume.
- 6 Press the [MENU] button.
•The menu will disappear.

9 Images Multi Playback

It is possible to display 9 images at once.

[Preparation]

- Set the mode dial to playback [▶].

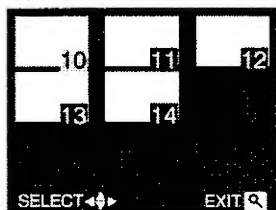
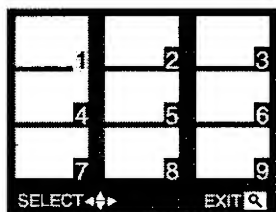


- 1 **During playback, press the zoom (W) button [Q].**

- Multi playback (9 frames) starts.

- 2 **Press ▲/▼/◀/▶ to select images.**

- To return to the normal indication, rotate the zoom lever towards [Q]. The image with the file number colored in yellow is displayed.

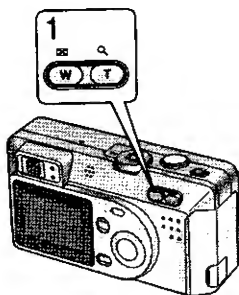


Using the Playback Zoom

During playback it is possible to enlarge pictures.

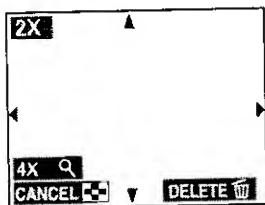
[Preparation]

- Set the mode dial to playback [▶].



1 During playback, press the zoom (T) button [Q].

- To enlarge further more, press the zoom (T) button [Q] again.
- To reduce the picture, press the zoom (W) button [Q].
- Use ▲/▼/◀/▶ to change the area to be enlarged.



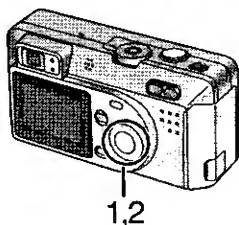
■ To delete a picture during the playback zoom

Press the [trash] button.

When this message is displayed "DELETE THIS PICTURE?", press ◀/▶ to select [YES], and press the ▼/[REVIEW/SET] button.

- The more the zoom magnification increases, the more the picture quality deteriorates.
- The playback zoom may not operate if pictures have been recorded with other equipment.

Playing Back Motion Images



[Preparation]

- Set the mode dial to playback ([▶]).

- 1 Press ◀/▶ to select the file with the motion image icon [📽️] ①.
- 2 Press the ▼/[REVIEW/SET] button to played back the motion image.
 - By pressing ▼, motion image playback will stop.

- The icon ② is corresponding to the ▲/▼/◀/▶ button.

[Fast forwarding/Fast rewinding]

During motion image playback, continue pressing ◀/▶.

- ▶ : Fast forward
- ◀ : Fast rewind

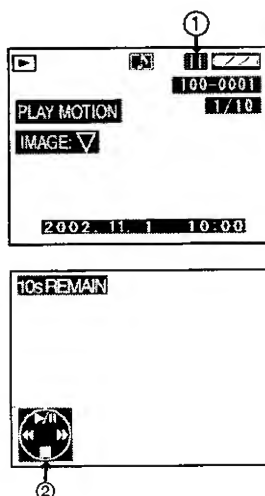
- When releasing the button, it turns to normal playback.

[To pause]

Press ▲ during motion image playback.

- Press ▲ again to cancel pause.

■ To adjust the sound volume (P63)



- When playing back motion images that have been recorded with other equipment, the quality of images may be deteriorated and images may not be able to be played back.
- The file format that can be played back with this camera is QuickTime Motion JPEG.
- It could happen that the Motion JPEG file recorded by PC or other equipments cannot be played back with this camera.
- When using a high capacity Memory Card, it is possible that fast rewinding may be slower.

Deleting Images

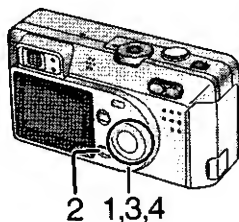
Images recorded on the card can be deleted. Once deleted, images cannot be recovered.

[Preparations]

- Set the mode dial to playback [▶].
- When an image is protected, it cannot be deleted. Cancel the protect setting. (P63)

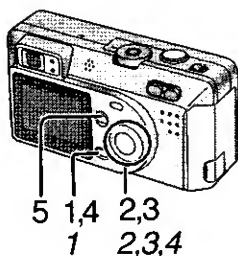
[Delete single image]

- 1 Press ◀/▶ to select the image to be deleted
- 2 Press [🗑️].
- 3 Press ◀/▶ to select [YES].
- 4 Press the ▼/[REVIEW/SET] button.
 - The selected image is deleted.

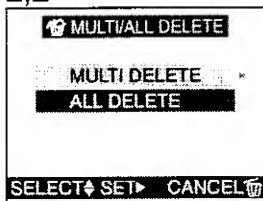


2

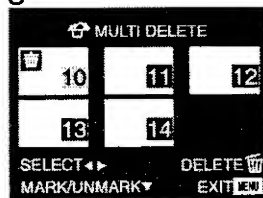




2,2



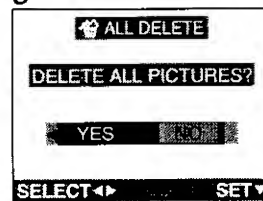
3



6



3



[Delete multi images]

It is possible to delete up to 50 images all at once.

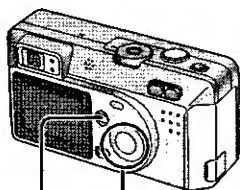
- 1 Press [] twice.
- 2 Press ▲/▼ to select [MULTI DELETE] and then press ►.
- 3 Press ◀/▶ to select the images to be deleted.
- 4 Press the ▼/[REVIEW/SET] button.
 - The selected images are displayed with []. Pressing ▼ again, the setting is cancelled.
 - The indication [] blinks red if the selected image is protected. Cancel the protect setting. (P63)
- 5 Press [].
- 6 When this message is displayed "DELETE THE PICTURES YOU MARKED?", press ◀/▶ to select [YES].
- 7 Press the ▼/[REVIEW/SET] button.
 - The selected multi images are deleted all at once.

[Delete all images]

Once deleted, images cannot be recovered.

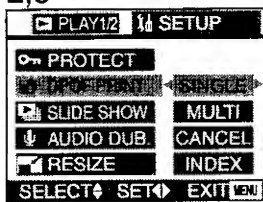
- 1 Press [] twice.
- 2 Press ▲/▼ to select [ALL DELETE] and then press ►.
- 3 When this message is displayed "DELETE ALL PICTURES?", press ◀/▶ to select [YES].
- 4 Press the ▼/[REVIEW/SET] button.
 - All images except protected images are deleted.

Writing the Print Information in the Card (DPOF Setting)

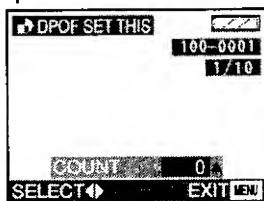


1 2,3,4,5
1 2,3,4,5

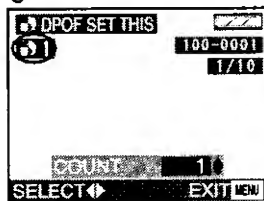
2,3



4



6



It is possible to write print information (DPOF data) on the card with the images that you want to print and the number of sheets.

DPOF is an abbreviation of Digital Print Order Format. With the DPOF corresponding system, you can add print information to the images on the Memory Card.

[Preparation]

- Set the mode dial to playback [P].

[Single copy setting]

- Press the [MENU] button.
- Press Δ/∇ to select [DPOF] and then press \blacktriangleright .
- Select [SINGLE] and then press \blacktriangleright .
- Press $\blacktriangleleft/\blacktriangleright$ to select 1 image.
- Press Δ/∇ to select the number of sheets.

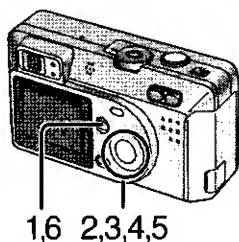
- The number of sheets can be set from 1 to 999.

- Press the [MENU] button twice.

- The menu will disappear.

[To cancel]

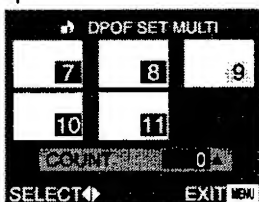
Set the number of sheets to 0 in step 5 of the [Single copy setting].



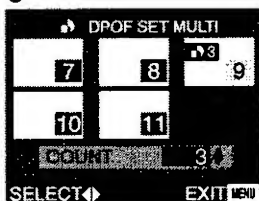
2,3



4



5



[Multi copy setting]

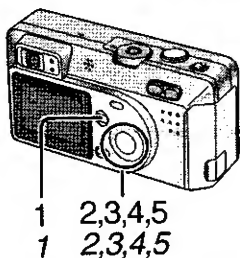
- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [DPOF] and then press ►.
- 3 Press ▲/▼ to select [MULTI] and then press ►.
- 4 Press ◀/▶ to select the image.
- 5 Press ▲/▼ to select the number of sheets to be printed.
 - The number of sheets can be set from 1 to 999.
- 6 Repeat steps 4 and 5, and at the end press the [MENU] button twice.
 - The DPOF setting of multi images is set at once.

[To cancel]

Set the number of sheets to 0 in step 5 of the [Multi copy setting].

- If the file is not based on the DCF standard, the _DPOF setting cannot be set.
- When using the DPOF feature, this camera will overwrite any previous DPOF settings made by other products.

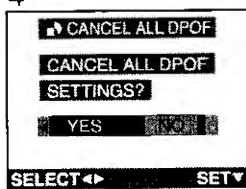
Writing the Print Information in the Card (DPOF Setting) (Continued)



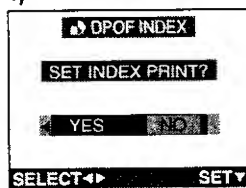
2,3,2,3



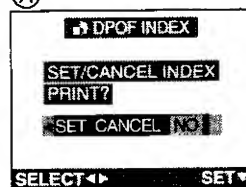
4



4



(A)



[To cancel all settings]

- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [DPOF PRINT] and then press ►.
- 3 Press ▲/▼ to select [CANCEL] and then press ►.
- 4 When this message is displayed "CANCEL ALL DPOF SETTINGS?", press ◀/▶ to select [YES].
- 5 Press the ▼/[REVIEW/SET] button.
 - All DPOF settings are cancelled.

[Index setting/to cancel]

- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [DPOF PRINT] and then press ►.
- 3 Press ▲/▼ to select [INDEX] and then press ►.
- 4 When this message is displayed "SET/CANCEL INDEX PRINT?", press ◀/▶ to select [YES].
 - When the index is already set, the message "SET/CANCEL INDEX PRINT?" is displayed.
Press ◀/▶ to select [SET], [CANCEL] or [NO].
- 5 Press the ▼/[REVIEW/SET] button.
 - All images are set/cancelled.

Protecting Images on the Card

It is possible to protect the important images recorded on the card from accidental erasure.

[Preparation]

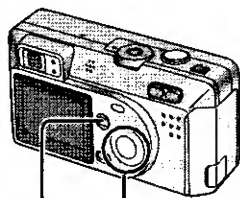
- Set the mode dial to playback [].

[Single setting/to cancel]

- 1 Press the [MENU] button.
- 2 Press Δ/∇ to select [PROTECT] and then press \blacktriangleright .
- 3 Press Δ/∇ to select [SINGLE] and then press \blacktriangleright .
- 4 Press \leftarrow/\rightarrow to select 1 image.
- 5 Press the ∇ /[REVIEW/SET] button.
 - The protect icon ① appears.
 - By pressing ∇ again, the protection is cancelled and the icon will disappear.
- 6 Press the [MENU] button twice.
 - The menu will disappear.

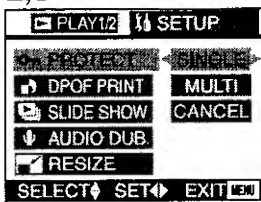
[Multi setting/to cancel, To cancel all settings]

- 1 The method is the same as in "Writing the Print Information in the Card (DPOF Setting)". (P60~P62)

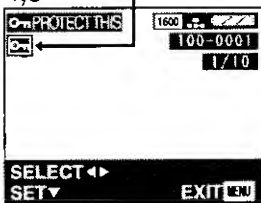


1,6 2,3,4,5

2,3

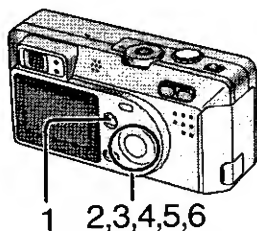


4,5



- Formatting the card will erase all the data on the card, even if you protect the images in this procedure.
- When trying to delete a protected file, these messages are displayed "THIS PICTURE IS PROTECTED" or "PROTECTED PICTURES REMAIN UNDELETED". If you want to delete this file, cancel the protect setting first.
- The protect setting is effective only in this camera.
- Sliding the SD Memory Card Write-Protect switch to [LOCK] prevents the picture from deletion even if the protection is not set.
- The audio dubbing cannot be used with protected images.

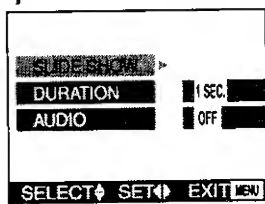
Playing Back with Slide Show (Automatic Playback)



2,3



4



6



All pictures selected in the card can be played back one-by-one automatically.

[Preparation]

- Set the mode dial to playback [▶].

- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [SLIDE SHOW] and then press ▶.
- 3 Press ▲/▼ to select [ALL]/[DPOF] and then press ▶.
 - [ALL]: for playing back all pictures
 - [DPOF]: for playing back the DPOF set pictures
- 4 Press ▲/▼/◀/▶ for setting below.
 - [DURATION]: it can be set among 1, 2, 3 and 5 seconds.
 - [AUDIO]: it can be set to [ON] or [OFF]. By setting it to [ON], it is possible to play back the still pictures with audio in slide show.
 - [DPOF SET] (Only when setting to [DPOF]): You can select the pictures you want to set to the Slide Show.
 - [CANCEL ALL] (Only when setting to [DPOF]): You can cancel the Slide Show setting.
- 5 Press ▲/▼ to select [SLIDE SHOW].
- 6 Press ▶.
 - The slide show starts.
 - By pressing the [MENU] button, it stops.

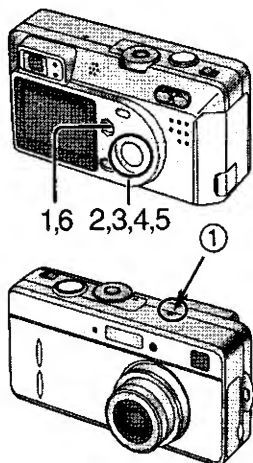
- In motion image playback, slide show is not available.
- When playing back still pictures with audio, you cannot set [DURATION].
- When editing with the supplied software [SD Viewer for DSC] recorded on the CD-ROM, you can play back in SD slide show with this camera. Read P86.
- Images that are set DPOF with the supplied software [SD Viewer for DSC] recorded on the CD-ROM cannot be played back in DPOF slide show with this camera. Set DPOF on this camera.
- When using the DPOF feature, this camera will overwrite any previous DPOF settings made by other products.

Adding Audio to Recorded Pictures (Audio Dubbing)

It is possible to add a 10-second narration to a recorded picture.

[Preparations]

- Set the mode dial to playback [▶].



- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [AUDIO DUB.] and then press ▶.
- 3 Press ◀/▶ to select the picture.
- 4 Press the ▼/[REVIEW/SET] button, to start audio recording. (① Microphone)

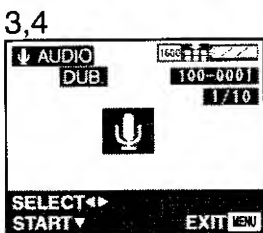
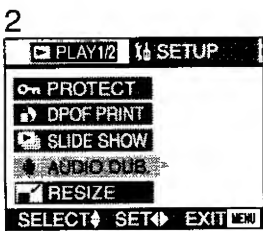
- When audio has already been recorded, after the audio dubbing the original audio is overwritten.
- When audio has already been recorded, this message is displayed "OVERWRITE AUDIO DATA?". Then press ◀/▶ to select [YES] and press the ▼/[REVIEW/SET] button, to start audio recording.

- 5 Press the ▼/[REVIEW/SET] button, to stop audio recording.

- Even if you do not press the ▼/[REVIEW/SET] button, after about 10 seconds the audio recording stops automatically.

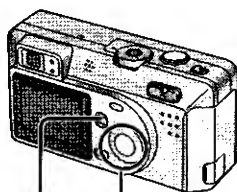
- 6 Press the [MENU] button.

- The menu will disappear.



- The audio dubbing cannot be used with motion images.
- The audio dubbing cannot be used with protected images.

Resizing the Recorded Pictures

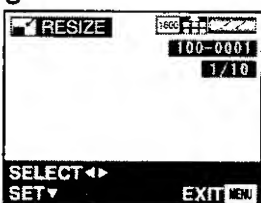


1,8 2,3,4,5,6,7

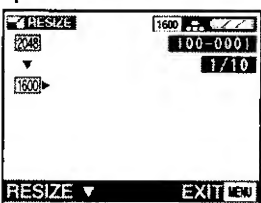
2



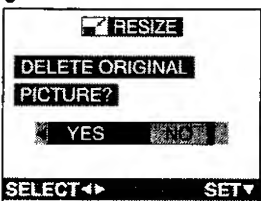
3



4



6



It is possible to reduce the recorded picture size. This function is useful if you want to reduce the volume of the picture for attaching to an e-mail or uploading on web-site.

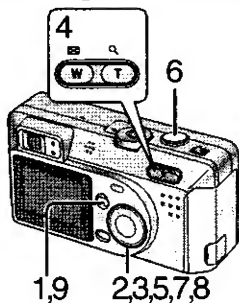
[Preparations]

- Set the mode dial to playback [▶].

- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [RESIZE] and then press ▶.
- 3 Press ◀/▶ to select the picture, and then press ▼.
 - It is not possible to resize pictures in a size lower than [640 × 480] or with an aspect ratio that is not 4:3.
- 4 Press ◀/▶ to select the size.
 - [1600] : 1600 × 1200
 - [1280] : 1280 × 960
 - [640] : 640 × 480
- 5 Press the ▼/[REVIEW/SET] button to set the size.
- 6 When this message is displayed "DELETE ORIGINAL PICTURE?", press ◀/▶ to select [YES] or [NO].
- 7 Press the ▼/[REVIEW/SET] button.
- 8 Press the [MENU] button.
 - The menu will disappear.

- It may not be possible to resize the pictures recorded with other equipments.
- It is not possible to resize the motion image.

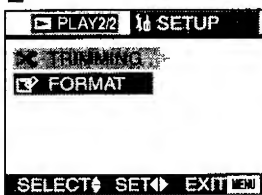
Trimming the Recorded Pictures



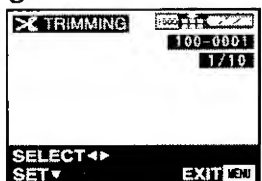
It is possible to cut off the unnecessary parts of the picture (trimming), and enlarge the remainder parts of the picture.



2



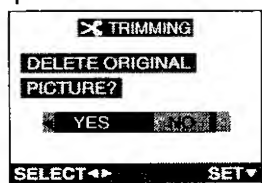
3



4,5,6



7



[Preparations]

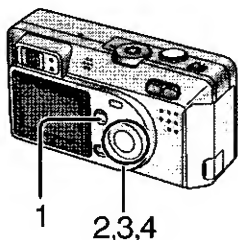
- Set the mode dial to playback [▶].

- 1 Press the [MENU] button.
- 2 Press ▲/▼ to select [TRIMMING] and then press ▶.
- 3 Press ◀/▶ to select the picture, and then press ▼.
- 4 Press the zoom button [Q] to make subjects closer, [R] to make subjects wider.
- 5 Press ▲/▼/◀/▶ to shift pictures.
- 6 Press the shutter button to set.
- 7 When this message is displayed "DELETE ORIGINAL PICTURE?", press ◀/▶ to select [YES] or [NO].
- 8 Press the ▼/[REVIEW/SET] button.
- 9 Press the [MENU] button.

- The menu will disappear.

- You cannot operate trimming on pictures recorded with other equipment.
- Motion images cannot be trimmed or enlarged.
- Trimming is not possible for pictures with audio or pictures with a size of [640 × 480] pixels.

Formatting the Card



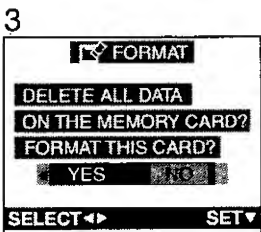
Usually, it is not necessary to format the card (initializing). Format the card when this message is displayed "MEMORY CARD ERROR".

[Preparation]

- Set the mode dial to playback [].

- 1 Press the [MENU] button.
- 2 Press $\blacktriangle/\blacktriangledown$ to select [FORMAT] and then press \blacktriangleright .
- 3 When this message is displayed "DELETE ALL DATA ON THE MEMORY CARD?", press $\blacktriangle/\blacktriangleright$ to select [YES].
- 4 Press the \blacktriangledown /[REVIEW/SET] button.

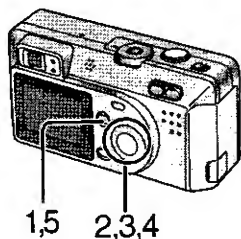
- The card is formatted.
- After formatting, recorded images and any other data cannot be recovered.



- During formatting, do not turn the power off.
- When the card is formatted by PC or other equipment, format the card on the camera again.
- If the card cannot be formatted, consult your dealer.

Adjusting the LCD Monitor Brightness

You can adjust the brightness of the LCD monitor.



[Preparation]

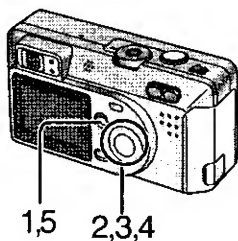
- Press the [DISPLAY] button to select the display of LCD monitor. (P20)

- 1 Press the [MENU] button.
 - 2 Press ► to open the setup menu.
 - 3 Press ▲/▼ to select [MONITOR]/[EVF].
 - 4 Press ◀/▶ to adjust the brightness.
 - 5 Press the [MENU] button.
- The menu will disappear.

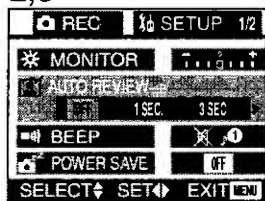
2,3



Using the Auto Review



2,3



Recording with the auto review set to [1SEC.]/[3SEC.] the recorded picture is automatically displayed on the LCD Monitor for about 1 or 3 seconds.

[Preparation]

Set the mode dial to except for []/[].

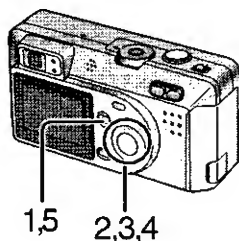
- 1 Press the [MENU] button.
- 2 Press ► to open the setup menu.
- 3 Press ▲/▼ to select [AUTO REVIEW].
- 4 Press ◀/▶ to select [1 SEC.] or [3 SEC.].
- 5 Press the [MENU] button.

- The menu will disappear.

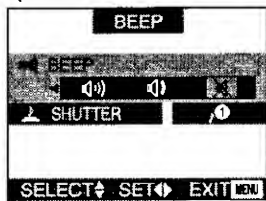
- Even when setting the auto review to [1SEC.]/[3SEC.], it is not available in motion image mode [].
- When recording in burst mode [], auto bracket, still picture with audio modes, the auto review is set to [1SEC.]/[3SEC.].
- In the Simple mode [], the auto review setting becomes [ON] (1 second) or [OFF].

Setting up the Operational Sound/Shutter Sound

It is possible to set the electronic shutter sound when the shutter button is pressed all the way and set the sound volume when the shutter button is pressed halfway and when the menu operations are done.



4



■ When the operational mode dial is set to REC mode (except for the Simple mode []).

- 1 Press the [MENU] button.
- 2 Press ► to open the setup menu.
- 3 Press ▲/▼ to select [BEEP] and then press ►.
- 4 Pressing ▲/▼/◀/▶ to adjust the operational sound/shutter sound volume.
- 5 Press the [MENU] button twice.
 - The menu will disappear.

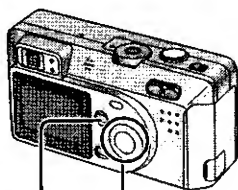
■ When the operational mode dial is set to playback []

- 1 Press the [MENU] button.
- 2 Press ► to open the setup menu.
- 3 Press ▲/▼ to select [BEEP].
- 4 Press ◀/▶ to adjust the operational sound volume.
- 5 Press the [MENU] button.
 - The menu will disappear.

• In the Simple mode [], the auto review setting becomes [ON] or [OFF].

Setting up the Power Save Mode

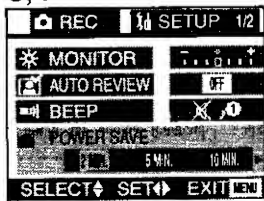
In this mode, if the camera is not operated for a certain amount of time, it is automatically turned off.



1,5 2,3,4

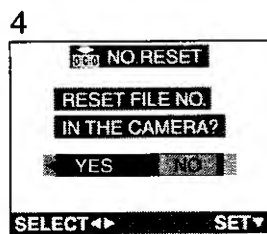
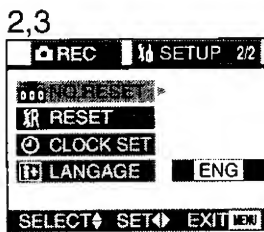
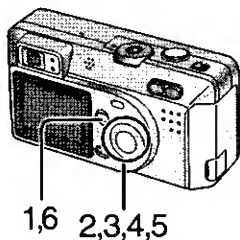
- 1 Press the [MENU] button.
- 2 Press ► to open the setup menu.
- 3 Press ▲/▼ to select [POWER SAVE].
- 4 Press ◀/▶ to choose the setting time.
 - [2 MIN.]
 - [5 MIN.]
 - [10 MIN.]
 - [OFF]: the power is not turned off automatically.
- 5 Press the [MENU] button.
 - The menu will disappear.

3,4



- If you want to cancel the power save mode, turn the power switch to [ON] again after turning it to [OFF], or press the shutter button.
- When using the AC adaptor, the power save mode is not available.
- In simple mode [♥], the power save is fixed to [2 MIN.].

Resetting the File Number



As the file numbers are recorded sequentially by the camera, when you use two or more cards, it may happen that the file numbers on your cards do not start from 0001.

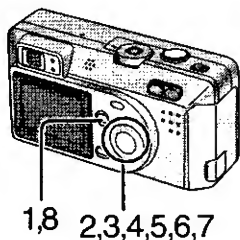
Use this function when you insert a new card or perform the new recording on the recorded card and you want to start recording from the file number 0001, or when you want to set the file numbers of the recorded cards in consecutive numbers.

[Preparation]

- Set the mode dial except for []/[].

- 1 Press the [MENU] button.
 - 2 Press ► to open the setup menu.
 - 3 Press ▲/▼ to select [NO. RESET] and then press ►.
 - 4 When this message is displayed "RESET FILE NO. IN THE CAMERA?", press ◀/▶ to select [YES].
 - 5 Press the ▼/[REVIEW/SET] button to set.
 - 6 Press the [MENU] button.
- The menu will disappear.

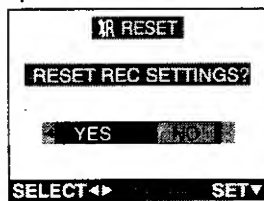
Initializing the settings



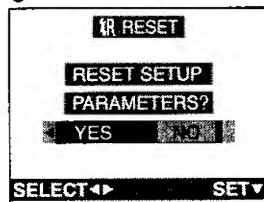
2,3



4



6



The settings are initialized using this function.

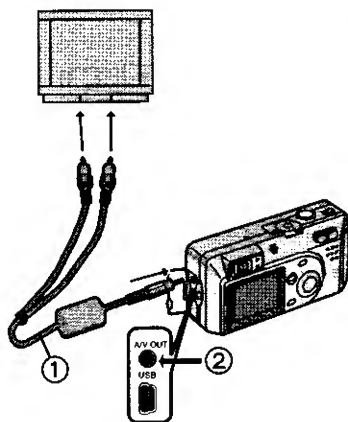
[Preparation]

- Set the mode dia except for []/[].

- Press the [MENU] button.
- Press ► to open the setup menu.
- Press ▲/▼ to select [RESET] and then press ►.
- When this message is displayed "RESET REC SETTINGS?", press ◀/▶ to select [YES].
- Press the ▼/[REVIEW/SET] button to set.
 - The message "REC SETTING RESET COMPLETED " is displayed for about 2 seconds.
- When this message is displayed "RESET SETUP PARAMETERS?", press ◀/▶ to select [YES].
- Press the ▼/[REVIEW/SET] button to set.
 - The clock setting is not reset.
- Press the [MENU] button.
 - The menu will disappear.

- In simple mode [], this function is unavailable.

Playing Back Images with a TV Monitor



By connecting the camera to a television via the supplied A/V cable ①, it is possible to view and play back the recorded images.

[Preparation]

- Turn the camera and the television off.

1 **Connect the A/V cable to the A/V OUT socket ② of the camera.**

2 **Connect the A/V cable to the video in and the audio in sockets of the TV.**

- Yellow: to the video in socket
- White: to the audio in socket

3 **Turn the television on and select external input.**

4 **Turn the camera on and then set the mode dial to playback [▶].**

- The image is displayed on the television.

■ Viewing images in other countries

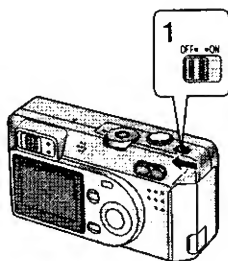
When setting [VIDEO OUT] on the menu, you can view images on the TV in other countries (regions) which use the NTSC or PAL system.

- Even if you set menu selection for [VIDEO OUT] to [PAL], the output signal is still NTSC system.

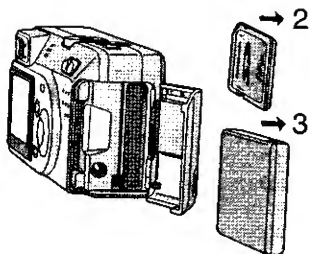
- When connecting to a TV, it is recommended that you use the AC adaptor as the power source.
- Do not use any other cables except the supplied one.
- Only when the mode dial is set to playback [▶], the image is displayed on the TV.
- Read the TV operating instructions too.

After Use

After using the camera and after following steps, it is recommended to place it in the optional soft case (DMW-CZ1), in order to protect it.

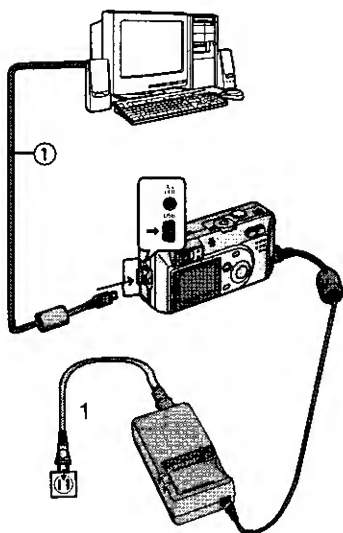


- 1 Turn the power switch to [OFF]. (P17)
- 2 Eject the card. (P15)
- 3 Remove the battery. (P12)



- If you will not be using the camera for a long time, remove the battery. (When you insert the battery again, set the date)

Connecting to a PC



[Preparation]

- Only if using Windows® 98 or Windows® 98 Second Edition, start the supplied CD from PC and install the USB driver.

- 1 **Insert the Memory Card into the camera, and turn the power switch to [ON].**
- 2 **Connect the camera to PC via supplied USB cable ①.**



[Windows]

The drive is shown on the [My computer] folder.

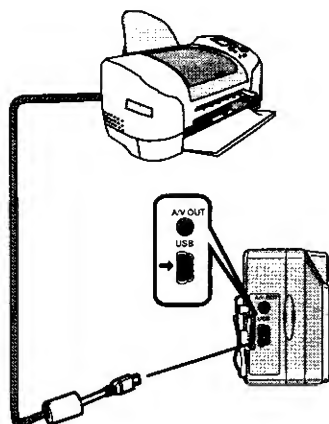
- If it is the first time you are connecting the camera to PC, the required driver is installed automatically in order to let the camera be recognized by the Windows Plug and Play, then it is shown on the [My computer] folder.

[Macintosh]

The drive is shown on the screen.

- When connecting to a PC it is recommended that you use the AC adaptor as the power source.
- When connecting the PC, the display of the LCD Monitor is set to off, and the status indicator lights.
- When connecting to a PC, picture and sound are not output from A/V out socket.
- For further information, read the supplied operating instructions for PC connection.

Connecting to a Printer

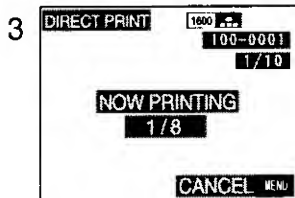
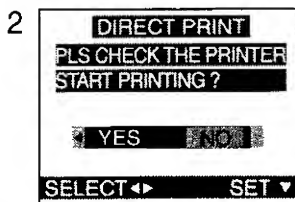
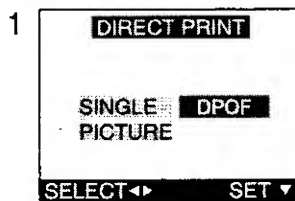


By connecting the camera to a printer corresponding to direct printing (Epson xxx) via the supplied USB connection cable, it is possible to print directly.

- 1 **Connect the camera and the printer via the supplied USB connection cable.**
- 2 **Insert the Memory Card into the camera, and turn the power switch to [ON].**

- When connecting to a printer, we recommend you to use the AC adaptor as the power source.
- Read the printer operating instructions too.

USB Direct Printing (DPOF)



[Preparation]

- Connect the camera to a printer.

- 1 **Press <▶/> to select [DPOF].**
 - Press the [MENU] button, and you can change the DPOF setting(P60).
- 2 **Press the ▼/[REVIEW/SET] button.**
 - The message "PLS CHECK THE PRINTER. START PRINTING ?" is displayed.
- 3 **Press <▶/> to select [YES], and then press the ▼/[REVIEW/SET] button.**
 - Printing starts.
 - Press the [MENU] button, and you can stop printing.

USB Direct Printing (Single Picture)

[Preparation]

- Connect the camera to a printer. (P79)

- 1 Only when DPOF is already set, press **◀/▶** to select [SINGLE PICTURE], and then press the **▼/[REVIEW/SET]** button.

- The message "PLEASE SELECT THE PICTURE TO PRINT" is displayed for 2 seconds.

- Press the [MENU] button, and you can change the DPOF setting. (P60)

- 2 Press **◀/▶** to select the picture to be printed.

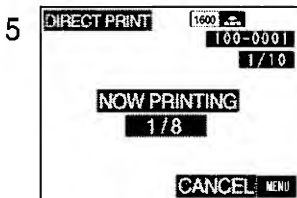
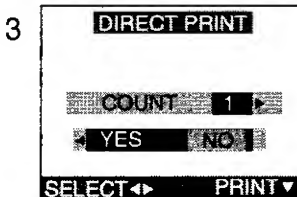
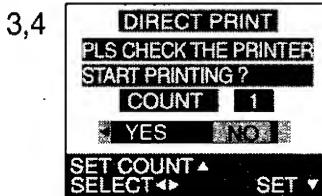
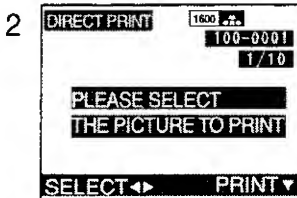
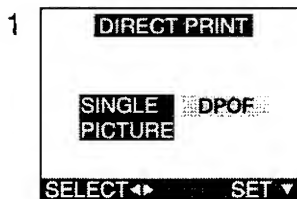
- 3 Press **▲**, and press **◀/▶** to set the number of sheets, and then press the **▼/[REVIEW/SET]** button.

- 4 Press **◀/▶** to select [YES].

- The message "PLS CHECK THE PRINTER. START PRINTING ?" is displayed.

- 5 Press the **▼/[REVIEW/SET]** button.

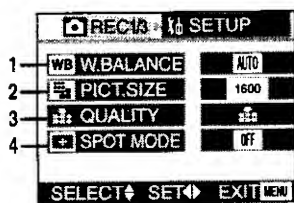
- Printing starts.
- Press the [MENU] button, and you can stop printing.



The Menu Items

REC mode menu

- For items without number, refer to those with the same name.



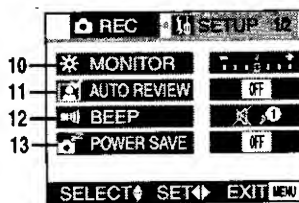
- 1 W.BALANCE (P48)
- 2 PICT. SIZE (P37)
- 3 QUALITY (P38)
- 4 SPOT MODE (P42)



- 5 SENSITIVITY (P50)
- 6 AUDIO REC. (P40)
- 7 CONT.AF (P34)
- 8 D. ZOOM (P31)



- 9 PICT. ADJ. (P47)



- 10 MONITOR (P70)
- 11 AUTO REVIEW (P71)
- 12 BEEP (P72)
- 13 POWER SAVE (P73)



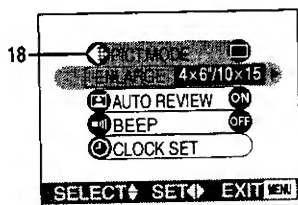
- 14 NO. RESET (P74)
- 15 RESET (P84)
- 16 CLOCK SET (P24)
- 17 LANGUAGE

The Menu Items (Continued)

Simple mode menu

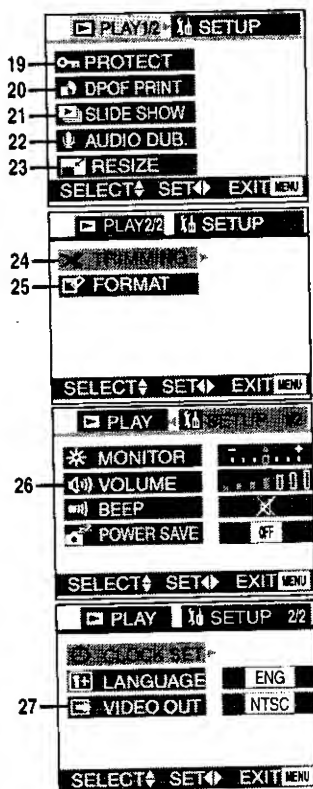
- For items without number, refer to those with the same name.

18 PICT.MODE (P27)



Playback mode menu

- For items without number, refer to those with the same name.



19 PROTECT (P63)

20 DPOF (P60)

21 SLIDE SHOW (P65)

22 AUDIO DUB. (P66)

23 RESIZE (P67)

24 TRIMMING (P68)

25 FORMAT (P69)

26 VOLUME (P54)

27 VIDEO OUT (P76)

Cautions for Use

■ Cautions for Use

Keep the digital camera away from magnetized equipment (such as a microwave oven, TV, video game equipment, etc.).

- If you use the digital camera on or near a TV, images and sounds may be disturbed due to electromagnetic wave radiation.
- Do not use the digital camera near a cell phone because doing so may cause noise to adversely affect the images and sounds.
- Recorded data may be damaged, or images may be distorted by strong magnetic fields created by speakers or large motors.
- Electromagnetic wave radiation generated by a microprocessor may adversely affect the digital camera, causing the disturbance of images and sounds.
- If the digital camera is affected by magnetically charged equipment and does not function properly, turn the camera off and detach the battery or AC adaptor and then connect the battery or AC adaptor again. Thereafter, turn the camera on.

Do not use the digital camera near radio transmitters or high-voltage lines.

- If you record near radio transmitters or high-voltage lines, recorded images or sounds may be adversely affected.

Do not spray insecticides or volatile chemicals onto the digital camera.

- If the digital camera is sprayed with such chemicals, the camera body may be deformed and the surface finish may peel off.
- Do not keep rubber or plastic products in contact with the digital camera for a long period of time.

When you use the digital camera on a beach or similar place, do not let sand or fine dust get into the camera.

- Sand or dust may damage the digital camera or card. (Care should be taken when inserting and removing the card)

When you use your digital camera on a rainy or snowy day or on a beach, make sure that no water enters the digital camera.

- Water may cause the digital camera or card to malfunction. (Irreparable damage may occur)
- If sea water splashes onto the digital camera, wet a soft cloth with tap water, wring it well, and use it to wipe the camera body carefully. Then, wipe it again thoroughly with a soft dry cloth.

Do not use the digital camera for surveillance purpose or other business use.

- If you use the digital camera for a long period of time, the internal temperature increases and, consequently, this may cause malfunction.
- The digital camera is not intended for business use.

Do not use benzine, thinner or alcohol for cleaning the digital camera.

- The camera body may be deformed and the surface finish may peel off.
- Before cleaning the camera, detach the battery or pull out the AC adaptor from the electrical outlet.
- Wipe the digital camera with a soft, dry cloth. To remove stubborn stains, wipe with a cloth that is soaked in a detergent diluted with water and afterward finish wiping with a dry cloth.
- For storing or transporting the digital camera, place it in a bag or case lined with soft pads to prevent the coating on the camera body from being worn.

After use, be sure to take the card out, and detach the battery or pull out the AC adaptor from the electrical outlet.

- If the battery is left on the digital camera for a long time, the voltage drops excessively, and the battery will not function even after it is recharged.

■ Optimal Use of the Battery

The battery is a rechargeable lithium ion battery. Its ability to generate power is based upon the chemical reaction that takes place inside it. This reaction is susceptible to the surrounding temperature and humidity, and, if the temperature is too high or too low, the operating time of the battery becomes shorter.

Be sure to detach the battery after use.

Be sure to detach the battery from the digital camera. (If it is left attached to the digital camera, a minute amount of current is consumed even when the digital camera power is off) If the battery is left attached to the digital camera for a long time, discharge takes place. The battery may become unusable after it is charged.

Dispose of an unusable battery.

- The battery has a limited life.
- Do not throw the battery into fire because it may cause an explosion.

Always keep the terminals of the battery clean.

Prevent the terminals from getting clogged with dirt, dust, or other substances.

If you drop the battery accidentally, check to see if the battery body and terminals are deformed. Attaching a deformed battery to the digital camera may damage the camera.

■ Condensation

When condensation has taken place:

Set the power switch to [OFF] and leave the digital camera in this condition for about 1 hour. When the camera becomes close to the ambient temperature, the fog disappears naturally.

■ Cautions for Storage

Before storing the digital camera, take the card out and detach the battery. Store all the components in a dry place with a relatively stable temperature.

(Recommended temperature:

15 to 25 °C,

Recommended humidity: 40 to 60 %)

Digital camera

- Wrap it with a soft cloth to prevent dust from getting into the camera.
- Do not leave the camera in places that expose it to high temperature.

Battery

- Extremely high or low temperatures will shorten the life of the battery.
- If the battery is kept in smoky or dusty places, the terminal may rust and cause malfunctions.
- Do not allow the battery terminals to come in contact with metal objects (such as necklaces, hairpins, etc.). This can result in a short circuit or heat generation and, if you touch the battery in this condition, you may be badly burned.
- Store the battery in a completely discharged state. To store the battery for a long period of time, we recommend you charge it once every year and store it again after you completely use up the charged capacity.

Card

- When the card is being read, do not remove the card, turn off the power, or subject it to vibration or impact.
- Do not leave the card in places where there is high temperature or direct sunlight, or where electromagnetic waves or static electricity are easily generated.
- Do not bend or drop the card. The card or the recorded content may be damaged.
- After use, be sure to remove the card from the digital camera.
- Do not touch the terminals on the back of the card with your fingers. Do not allow dirt, dust or water to enter it.

■ LCD Monitor/Lens Ring

LCD Monitor

- In a
- place with drastic temperature changes, condensation may form on the LCD Monitor. Wipe it with soft dry cloth.
- If the digital camera is extremely cold when you turn the power on, the image on the LCD Monitor is slightly darker than usual at first. However, as the internal temperature increases, it goes back to the normal brightness.

Extremely high precision technology is employed to produce the LCD Monitor screen featuring a total of approximately 110,000 pixels. The result is more than 99.99% effective pixels with a mere 0.01% of the pixels inactive or always lit. However, this is not a malfunction and does not affect the recorded picture.

Viewfinder

- Do not direct the Viewfinder or lens to the sun. Internal components may be seriously damaged.

Extremely high precision technology is employed to produce the Viewfinder screen featuring a total of approximately 110,000 pixels. The result is more than 99.99% effective pixels with a mere 0.01% of the pixels inactive or always lit. However, this is not a malfunction and does not affect the recorded picture.

Lens ring

- If you push the zoom lever toward W during recording with the filter or conversion lens attached to the digital camera, 4 corners of the image may become dark (vignetting). For details, refer

to the operating instructions of your accessories.

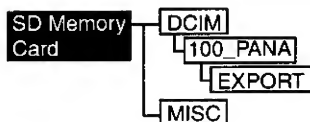
- Be sure to keep the lens ring attached to the digital camera so as to shut out unnecessary light.

■ SD Slide Show

If setting the SD slide show with the [SD Viewer for DSC] which is in the supplied CD-ROM, when playing back, the message "START SD SLIDE SHOW?" is displayed. Select [YES] and press the ▼/[REVIEW/SET] button to start the SD slide show. Select [NO] and press the ▼/[REVIEW/SET] button to start normal playback.

■ Folder Composition

When the Memory Card where data are recorded is inserted into a PC, the folders shown below will be displayed.



- In the 100_PANA folder it is possible to record up to 999 images.
- In the MISC folder it is possible to record the files that have been set with DPOF settings.

Warning Indications

[NO MEMORY CARD]

Insert the Memory Card.

[THIS MEMORY CARD IS PROTECTED]

Cancel the Memory Card lock.

[NO VALID IMAGE TO PLAY]

Carry out playback after recording or after inserting the Memory Card with a recorded image.

[MEMORY CARD FULL]

Insert a new Memory Card or delete the useless data.

[REMOVE LENS CAP AND PRESS SET BUTTON]

Remove the lens cap and then press the **▼**/[REVIEW/SET] button.

[MEMORY CARD ERROR]

Failed access to Memory Card.
Insert the card again.

[READ ERROR]

Data reading error.
Play it back again.

[WRITE ERROR]

Data writing error.
Turn the camera [OFF] and remove the card. Then insert the card and turn the camera back [ON]. Be sure camera is [OFF] before removing or inserting the card to avoid damaging the card.

[PLEASE SET THE DATE/TIME]

This message is displayed when you use the camera for the first time or you do not use the camera for a long time.
Set the clock again.

[THIS PICTURE IS PROTECTED]

After cancelling the protect setting, you can delete or overwrite the image.

[THIS PICTURE CAN'T BE DELETED] / [SOME PICTURES CAN'T BE DELETED]

After cancelling the protect setting, you can delete the image.

[NUMBER OF PRINT IS OVER]

You have exceeded the number of images that can be set at once, with multi deleting, protect and DPOF settings.

[CAN'T BE SET ON THIS PICTURE] / [CAN'T BE SET ON SOME PICTURES]

If the image is not based on the DCF standard, it is not possible to set the DPOF.

[MEMORY CARD ERROR FORMAT THIS CARD?]

The format of this card cannot be recognized by the camera. Format this again with the camera.

Troubleshooting

1: The power does not turn on.

1-1: Are the battery and the AC adaptor correctly connected? Check the connection.

1-2: Is the battery sufficiently charged? Use a battery that has been sufficiently charged.

2: As the power is turned on, it turns off immediately.

2-1: Is the battery charge insufficient to operate the camera? Charge the battery or replace it with charged one.

2-2: Has condensation occurred? Carrying the digital camera from a cold place to a warm place could cause condensation to form inside the camera. Wait until condensation disappears.

3: The image cannot be recorded.

3-1: Is the Memory Card inside?

3-2: Is the mode dial correctly set? Check it.

3-3: There is no memory capacity left on the card. Before recording, delete some images.

4: The image is not displayed on the LCD monitor.

4: Is the the image displayed on the Viewfinder? Press the [DISPLAY] button to switch to LCD monitor display.

5: The LCD monitor/Viewfinder is too bright or dark.

5: Adjust the brightness of the LCD monitor/Viewfinder.

6: Flash does not light.

6: The flash mode is set to forced OFF. Change the flash mode.

7: The display or images on the LCD monitor/Viewfinder are not focused.

7: Set the mode dial to the mode corresponding to the distance to the subject.

8: The image cannot playback.

8-1: Is the Memory Card inside?

8-2: There is no image in the Memory Card.

8-3: The mode dial is not set to playback [].

9: The image is not displayed on the television.

9-1: Is the camera correctly connected with the TV? Check it.

9-2: Set the TV to video input mode.

10: When connecting to PC, images cannot be transferred.

10: Check that the camera is correctly connected to the PC.

11: The clock setting is reset.

11-1: If you do not use the camera for a long time, the clock setting may be reset. When the message [PLEASE SET THE DATE/TIME] appears, set the clock again.

11-2: When you take a picture before setting the clock, [2002.1.1 0:00] is recorded.

Specifications

Digital Camera

Information for your safety

Power Source:	DC 4.2 V
Power Consumption:	2.1 W (When recording with LCD Monitor) 1.8 W (When playing back with LCD monitor)
Effective number of pixels	3.2 Million Pixels
Image sensor	1/2.5 inch CCD, total pixel number 3,340,000 Complementary color filter
Lens	Optical 3× zoom, f=5.8-17.4 mm (35 mm film camera equivalent: 35-105 mm)/F2.8-5.0
Digital zoom	Max 3× (variable)
Focus	Auto/Macro Normal/Spot AF change
Focus range	Auto: 1.64 feet (50 cm)(Wide)/1.64 feet (50 cm) (Tele) - ∞, Macro: 0.66 feet (20 cm) (Wide)/1.64 feet (50 cm) (Tele) - ∞
Shutter system	Electronic shutter + Mechanical shutter
Burst recording	4 frames/second, Max 9 frames (standard)/ 5 frames (fine)
Motion image recording	320 × 240 (10 frames/second with audio)
ISO sensitivity	AUTO/50/100/200/400
Shutter speed	AUTO mode/Program AE (ISO AUTO mode): 1-1/2,000 Motion image mode: 1/30 - 1/1,000
White balance	AUTO/Daylight/Cloudy/Halogen/Flash /White set
Exposure (AE)	AUTO _ Exposure compensation (1/3 EV Step, -2 - +2 EV)
Metering mode	Multi/Spot
LCD monitor	1.5 inch low-temperature polycrystalline TFT LCD (114,000 pixels)
Viewfinder	Color electrical Viewfinder (with diopter adjustment) (-4 +4dioptor)
Flash	Built-in flash flash range: (ISO 100) approx. 0.98 feet (30 cm) - 6.89 feet (2.1 m) AUTO, AUTO/Red-eye reduction, Forced ON, Slow sync./Red-eye reduction, Forced OFF
Microphone	Monaural
Speaker	Monaural
Recording media	SD Memory Card/MultiMediaCard
Recording size	2048 × 1536, 1600 × 1200, 1280 × 960, 640 × 480 (Still picture) 640 × 480, 320 × 240 (Motion image)
Quality	Fine/Standard

Recording file format

Still Picture	JPEG (Design rule for Camera File system, based on Exif 2.2 standard), DPOF corresponding
Still picture with audio	JPEG (Design rule for Camera File system, based on Exif 2.2 standard) + 640 × 480 QuickTime Motion JPEG (still picture with audio)
Motion image	QuickTime Motion JPEG (motion image with audio)
Interface	
Digital	USB
Analog video/audio	NTSC/PAL Composite/Audio line output (monaural)
Terminal	
USB	5 pin Mini USB
Analog video/audio	Φ 2.5 mm jack
DC IN	EIAJ type 3 jack
Dimensions (W × H × D)	0.41 × 2 × 1.26 inch/104 × 50.9 × 32.1 mm (excluding the projection part)
Weight	Approx. 5.64 oz/160 g (excluding Memory Card and battery) Approx. 6.35 oz/180 g (with Memory Card and battery)

AC adaptor (Panasonic DE-928A)

Information for your safety

Input	110 - 240 V ~ 50/60 Hz, 16 VA (100 V), 23 VA (240 V)
Output	DIGITAL CAMERA 4.2 V = 1.5 A CHARGE 4.2 V = 0.65 A

Battery pack (lithium-ion) (Panasonic DMW-BCA7)

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Information for your safety

Voltage/capacity	3.6 V, 680 mAh
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